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FOURTEENTH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH

OF

SOUTH CAROLINA,

THE LIBRARY OF THE

SEP 26 1934

FOR

UNIVERSITY OF ILLINOIS

THE FISCAL YEAR ENDING OCTOBER 31, 1893.

TO THE LEGISLATURE OF SOUTH CAROLINA.

COLUMBIA, S. C.

CHARLES A. CALVO, JR., STATE PRINTER.

1893.

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LETTER OF TRANSMITTAL.

OFFICE STATE BOARD OF HEALTH.

To His Excellency B. R. TILLMAN,

Governor of South Carolina.

SIR: I have the honor, in conformity with the laws of the State, herewith to transmit through your Excellency to the Honorable the Senate and House of Representatives of South Carolina, this the Fourteenth Annual Report of the State Board of Health, for the fiscal year ending October 31st, 1893.

Respectfully,

J. R. BRATTON, M. D.,

Chairman Executive Committee State Board of Health.

26834 dng. v. 14 1892/93 cont'd w.m.

MEMBERS OF EXECUTIVE COMMITTEE.

J. R. BRATTON, M. D.....	YORKVILLE.
W. H. NARDIN, M. D.....	ANDERSON.
C. R. TABER, M. D.....	FORT MOTTE.
A. A. MOORE, M. D.....	CAMDEN.
JAMES EVANS, M. D	FLORENCE.
T. GRANGE SIMONS, M. D.....	CHARLESTON.
H. D. FRASER, M. D.....	CHARLESTON.
Hon. D. A. TOWNSEND, ATTORNEY-GENERAL, (<i>Ex Officio</i>).	
Hon. W. H. ELLERBE, COMPTROLLER-GENERAL (<i>Ex Officio</i>).	
J. R. BRATTON, M. D., CHAIRMAN.	
H. D. FRASER, M. D., SECRETARY.	

STANDING COMMITTEES.

On Ordinances and the Sanitary Code :

T. GRANGE SIMONS, M. D.
J. R. BRATTON, M. D.
ATTORNEY-GENERAL D. A. TOWNSEND.

On Endemic and Epidemic Diseases :

C. R. TABER, M. D.
JAMES EVANS, M. D.
H. D. FRASER, M. D.

On Quarantine :

T. GRANGE SIMONS, M. D.
ATTORNEY-GENERAL D. A. TOWNSEND.
C. R. TABER, M. D.

On Registration of Vital Statistics :

H. D. FRASER, M. D.
COMPTROLLER-GENERAL W. H. ELLERBE.
W. H. NARDIN, M. D.

On Finance :

H. D. FRASER, M. D.
COMPTROLLER-GENERAL W. H. ELLERBE.
T. GRANGE SIMONS, M. D.

On Sanitary Regulation of Schools :

JAMES EVANS, M. D.
C. R. TABER, M. D.
W. H. NARDIN, M. D.

On Sanitary Condition of State Penal and Charitable Institutions :

A. A. MOORE, M. D.
ATTORNEY-GENERAL D. A. TOWNSEND.
COMPTROLLER-GENERAL W. H. ELLERBE.

On Local and Sub-Boards of Health :

A. A. MOORE, M. D.
H. D. FRASER, M. D.
ATTORNEY-GENERAL D. A. TOWNSEND.

Local Boards of Health.

ABBEVILLE COUNTY.

ABBEVILLE C. H.—H. T. Tustin, J. Gamble (Secretary), and G. A. Vizanski.

COKESBURY.—B. C. Hart, M. D., W. Townes Jones, M. D., (Chairman), and L. Dawson, Esq.

DUE WEST.—J. W. Wideman, M. D., P. R. Henry and J. B. Bounce.

LOWNDESVILLE.—A. J. Speer, M. D.

NINETY-SIX.—J. Rogers, G. T. Jackson and L. M. Moore.

AIKEN COUNTY,

AIKEN.—T. G. Croft, M. D., and J. B. Henderson, Esq.

ANGLEY.—J. M. Woodward, M. D., J. D. Lee, M. D., and H. W. Jordan, Esq.

ANDERSON COUNTY.

ANDERSON C. H.—W. H. Nardin, M. D., M. L. Sharpe, M. D., Samuel Orr, M. D., and John E. Breazeale, Esq.

PENDLETON.—Thomas J. Pickens, M. D., Paul H. E. Sloan, M. D., and T. S. Crayton, Esq.

WILLIAMSTON.—H. J. Epting, M. D., Wistar Wilson, M. D., and M. Lander.

BELTON.—W. H. Todd, M. D., (Chairman), J. C. Harris, M. D., G. W. McGhee.

BARNWELL COUNTY.

ALLENDALE.—W. S. Hay, M. D., M. D. Pitts and T. S. Myers, Esqs.

BAMBERG.—J. B. Black, M. D., W. B. Rice, M. D., and E. R. Hays.

BARNWELL.—New Board appointed.

BLACKVILLE.—L. C. Stevens, M. D., G. D. C. Lange and C. C. Rush.

GRAHAM'S.—E. T. Frederick, M. D., H. C. Rice, Esq., and Capt. S. Liebman.

MIDWAY.—Not reported.

WILLISTON.—S. Weathersbee, T. W. Youngblood and Julian Brown, Esqs.

BEAUFORT COUNTY.

BEAUFORT.—H. M. Stuart, M. D., Mr. Geo. Holmes, A. P. Prioleau, M. D., George Waterhouse, Esq., Edward Wallace (colored), and W. H. Lockwood (Secretary).

PORT ROYAL.—J. J. Jernigan, Esq.

BERKELEY COUNTY.

Mt. PLEASANT.—John Y. DuPre, M. D., E. M. Royall, M. D., J. H. Patjens, J. A. Leland, J. R. Tomlinson, Claus Koper, A. W. Tincken, Esq., and J. L. Witsell.

SUMMERTON.—Daniel Fludd, M. D. (Chairman).

ST. STEPHEN'S.—W. E. Wallace, M. D., A. M. Rickenbaker, D. N. Welch and N. H. Parris, Esqs.

CHARLESTON COUNTY.

CHARLESTON.—T. R. McGahan, Esq. (Chairman), Middleton Michel, M. D., Allard Memminger, M. D., G. E. Manigault, M. D., C. P. Aimar, Ph. D., R. M. Marshall, Esq., H. B. Horlbeck, M. D. (Secretary), Hall T. McGee, A. Sidney Smith, M. A. Connor and W. P. Carrington.

MOULTRIEVILLE.—Edward Welling, J. C. LaCoste and John McInery.

CHESTER COUNTY.

CHESTER C. H.—S. M. Davega, M. D., Mr. J. J. Stringfellow and G. W. Gage.

CHESTERFIELD COUNTY.

CHERAW.—Cornelius Kollock, M. D., John J. Wilson, M. D., and H. D. Malloy, Esq.

CLARENDON COUNTY.

MANNING.—W. E. Brown, M. D., B. P. Barron, G. Allen Huggins, M. D., and B. A. Walker.

SUMMERTON.—B. M. Badger, M. D., J. L. Burgess, M. D., and John C. Ingram, Esq.

COLLETON COUNTY.

WALTERBORO.—Charles Witsell, M. D., B. G. Hyme, L. Bellinger and Albert Wideman.

GEORGE'S.—M. C. Connor (Chairman), J. C. Mellard, M. D., and J. H. Abbott, Sr., M. D.

REEVESVILLE.—C. R. Council (Chairman), H. C. Mueller, M. D., and D. C. Whetsell, Esq.

DARLINGTON COUNTY.

DARLINGTON.—J. C. Wilcox, M. D., G. W. Brown and A. C. Spann, Esqs.

DOVESVILLE.—A. B. Dove, Esq. (Chairman), W. T. Gee, Esq., and J. Wilson Gandey, Esq.

FLORENCE.—J. W. King, M. D., James Evans, M. D., and W. J. Norris, Esq.

TIMMONSVILLE.—James F. Culpepper (Chairman), W. W. Moore, Esq., and J. S. M. Smith, Esq.

EDGEFIFLD COUNTY.

EDGEFIELD.—F. W. P. Butler, M. D., Jno. K. Allen, J. M. Jones, W. M. Burnett and L. Charlton.

JOHNSTON'S.—J. E. Cowles, M. D., J. D. Eidson (Secretary), and P. L. Wright.

TRENTON.—Dr. G. W. Wise (Chairman), L. H. McCullough and T. B. Hord.

FAIRFIELD COUNTY.

WINNSBORO.—R. B. Hanahan, M. D., and G. H. McMaster, Esq.

RIDGEWAY.—W. T. Edmunds, M. D., A. T. Ruff, Esq., and A. A. Morris, Esq.

FLORENCE COUNTY.

FLORENCE.—Dr. E. Miller, Dr. F. P. Covington and Dr. Jas. Evans.

GEORGETOWN COUNTY.

GEORGETOWN.—George E. T. Sparkman, M. D. (Chairman), T. P. Bailey, M. D., Major B. A. Munnerlyn, Josiah Doar, B. J. Hazzard, Jr., W. P. Porter, James Brownfield (colored), and Joseph Morrell, Esqs.

GREENVILLE COUNTY.

GREENVILLE.—W. Crookshanks, Esq., and Prof. J. M. Harris.

HAMPTON COUNTY.

HAMPTON C. H.—Major W. H. Mauldin, J. H. Goethe, M. D., and E. F. Warren, Esq.

BRUNSON'S.—A. D. Williams, M. D., C. G. Richardson, M. D., and Judge Julian Brown.

VARNVILLE.—J. H. Goethe, M. D., J. A. Connor, Esq., and R. A. Dykes, Esq.

HORRY COUNTY.

CONWAY.—Evan Norton, M. D., J. H. Grant, M. D., and Thomas W. Beaty, Esq.

KERSHAW COUNTY.

CAMDEN.—A. A. Moore, M. D. (Chairman), L. H. Deas, M. D., L. D. DeSaussure, M. D., and A. W. Burnett, M. D.

LANCASTER COUNTY.

LANCASTER C. H.—M. P. Crawford, M. D., —— Fitzgerald.

LAURENS COUNTY.

LAURENS C. H.—J. P. Simpson, M. D., T. E. Todd, M. D., and N. B. Dial, Esq.

LEXINGTON COUNTY.

LEXINGTON C. H.—C. E. Leaphart, M. D., B. K. H. Kreps, M. D., and G. M. Harman, Esq.

LEWISDALE.—D. M. Crosson, M. D., (Chairman), A. P. Drafts, Esq., A. Mims, Esq., and J. G. Martin, Esq.

LEESVILLE.—W. T. Derrick, Esq., Dr. W. T. Edmunds, Jr., Capt. J. S. Derrick, A. P. West and J. J. Shealy.

BATESBURG.—T. S. Fox, M. D., O. J. Harris, M. D., and W. B. Plunkett, Esq.

PEAK'S.—I. L. Dominick, Esq., W. F. Lake, Esq., J. K. Chapman, M. D., and Brooks Swygert (Secretary).

MARION COUNTY.

MARION C. H.—J. L. Mullins, M. D., D. S. Price, M. D., and W. B. McMillan, Esq.

MARLBOROUGH COUNTY.

BENNETTSVILLE.—W. J. David, M. D., J. L. Gordon, M. D., and Captain Dudley.

NEWBERRY COUNTY.

NEWBERRY C. H.—James McIntosh, M. D., E. C. Jones, G. A. Houseal, J. C. Wilson, T. C. Pool, G. M. Girardeau, James Kibler, G. A. Langford and A. McLane.

PROSPERITY.—J. D. Bruce (Chairman).

OCONEE COUNTY.

WALHALLA.—

SENECA CITY.—B. F. Sloan, A. W. Adams, Jos. B. Stribling, M. D., and W. S. Hunter.

ORANGEBURG COUNTY.

ORANGEBURG C. H.—W. C. Wannamaker, M. D., George Bolivar, M. G. Salley, M. D., D. M. Smith, B. Williamson, Rev. A. G. Townsend (colored), A. H. Riggs.

ST. MATTHEW'S.—W. L. Pou, M. D., A. R. Ables, W. H. Hennan.

FORT MOTTE.—Wm. Champey, Esq., and J. K. Legare, Esq.

BRANCHVILLE.—J. C. Rivers, Esq., S. S. Wallace, Esq., and M. S. Gressett, Esq.

PICKENS COUNTY.

EASLEY.—R. J. Gilliland, Jr., M. D., A. M. Folger and J. W. Williams.

CENTRAL.—S. W. Clayton, M. D., J. M. Folger, M. D., and John R. Williams, Esq.

RICHLAND COUNTY.

COLUMBIA.—Capt. J. S. Wiley (Chairman), Frank Green, M. D., Earl Turner, B. F. Griffin, L. K. Philpot, M. D., G. W. Parker, Rufus Muller, A. L. Gaubert, M. D., T. B. Aughtry, E. Ehrlich, J. Bouknight, M. D., J. M. Smith, W. J. Cathcart (Clerk), E. E. Jackson, M. D., (City Registrar).

SPARTANBURG COUNTY.

SPARTANBURG C. H.—J. J. Boyd, M. D., (Chairman,) D. Kahn, (Secretary), P. G. Kirby, C. H. Carlisle, A. G. Means, M. D. Bryant, L. P. Walker, C. S. Greenleaf, R. A. Robinson, S. B. Ezell, J. Watkins Lee, Dr. Joseph Hill, Thomas Dickson, J. K. Glass.

GAFFNEY'S.—H. H. Holmes, M. D., (Chairman,) J. R. Spencer, J. D. Westvelt and Dr. W. A. Fort.

SUMTER COUNTY.

SUMTER C. H.—John S. Hughson, M. D., A. J. China, M. D., and Col. J. H. Earle.

MAYESVILLE.—L. George Corbett, M. D., (Chairman).

UNION COUNTY.

UNION C. H.—W. M. Meador, M. D., J. W. Posey, M. D., and M. W. Culp, M. D., (Secretary.)

WILLIAMSBURG COUNTY.

KINGSTREE.—D. C. Scott, M. D., J. S. Brockinton and W. J. Lee.

YORK COUNTY.

YORKVILLE.—J. R. Bratton, M. D., and Col. Wm. McCorkle.

ROCK HILL.—John C. Witherspoon, Esq., Dr. W. J. White and J. B. Patrick, M. D.

TOWNSHIP BOARDS OF HEALTH.

ST. JAMES SANTEE.

Dr. S. D. Doar, Mr. A. H. Seabrook, Jr., Mr. Hibben Leland.

NEWBERRY TOWNSHIP No. 1.

Dr. James McIntosh, Dr. J. K. Gilder, Dr. J. A. Cofield.

BEAUFORT TOWNSHIP.

H. M. Stuart, M. D., A. P. Prioleau, M. D., Mr. George Waterhouse,
Mr. George Holmes and Mr. Jernigan.

BATES TOWNSHIP, GREENVILLE COUNTY.

M. L. West, M. D., R. Mayes Cleveland and J. M. Whitmire.

ELLOREE TOWNSHIP, ORANGEBURG COUNTY.

Dr. Epting and Messrs. Slawson and Johnson.

MOBLEY TOWNSHIP, EDGEFIELD COUNTY.

J. J. Buster, M. D., Rev. C. DeLoach, H. M. Herlong, W. W
Padgett and H. C. Brodie.

GENERAL REPORT.

To His Excellency B. R. TILLMAN, Governor of South Carolina.

SIR: I have the honor in conformity with the laws of the State herewith to transmit through your Excellency to the honorable the Senate and House of Representatives of South Carolina this the Fourteenth Annual Report of the State Board of Health for the fiscal year ending October 31st, 1893 :

To the Honorable the Senate and House of Representatives.

GENTLEMEN : The importance and necessity for preventive sanitary measures developed many years ago in the organization of a State Board of Health, have lost no influence nor weight with the lapse of time, but continue to impress upon the minds of intelligent thinking men the truths of their utility and benefit and the great blessings to be conferred in the future on the people of the State in the preservation of health and consequent prolongation of human life.

The history of the State Board of Health, its origin, progress since 1877, and its present status, may be found on the pages of former Reports, and being now established in every County of the State by means of local sub-Boards of Health, it has already given ample testimony of its benevolent and humane work. The deep interest manifested by each member of the Executive Committee in their earnest, prompt endeavors to ward off the encroachment of disease in every section of the State, along the coast or railroad line of travel, according to the meagre, scanty means dispensed to them for the noble work, still glows with the same ardor and intense interest, and will continue to do so till they have fully discharged their duty in the completion of the work assigned them, or the same may be handed over to their more practical and worthy successors.

Such interest is not local nor stationary, but by instruction in hygiene and advisory measures is gradually extending itself to every section of the State.

An enlightened, educated State can bestow upon its people no more noble nor benevolent gift than a knowledge of public sanitation, because by the study of sanitary truths and their timely, proper application, health is preserved and life prolonged, thus increasing and advancing the comforts of life itself, adding to the population and

consequent wealth of the whole people of the State. For this great, noble and humane purpose was this organization conceived and developed. As an evidence of the work executed by this Board in the organization and execution of a practical system of quarantine along the coast and lines of railroad travel along the northern border of the State, allow me to recall to your memory the protection procured and rendered the people of the State in 1888 against the introduction of yellow fever from Cuba and Florida, when the latter was so terribly scourged in the loss of many valuable lives and millions of valuable property. Since then the quarantine system has advanced and become more complete and efficient by the operation of Holt's Plant, now located at Fort Johnson, in Charleston harbor.

The history of medicine and the unfolding of simple sanitary measures of a domestic character reveal the fact that the first indication or information on the subject of public health and the preservation of the same, originated in England more than fifty years since by the appointment of a Health Officer by the government, associated with a temporary Board of Health, which, though temporary in its premeval state, soon afterwards became permanent and efficient in its sanitary work. The sanitary measures adopted in that day and country were confined to the examination or inspection of water used for drinking, and the work of efficient drainage.

There was unity of sentiment and harmony of action between the people and their Legislatures, who represented these vital interests in the British Parliament.

Then, as well as in our day, inquiry was made as to the proportions of diseases in the different sections of the country, and then the truth was fully established that the prevalence of disease was far more extensive and intensive in those sections where the purity of the water and drainage were most deficient. In that day and time, and under surrounding circumstances, medical men prominent in their profession, just as such men in our day, studied and observed the true benefits arising from the association of sanitary education with State authority, and hence arose that permanent organization forming the basis of our own modern State Board of Health.

A people educated in sanitary science, even in its simplest branches, naturally and earnestly inquire after and observe the teachings and practice of sanitary rules and regulations, and thus become acquainted with the blessings and benefits arising from such measures properly applied, and encourage true co-operation between their State authorities and the medical authorities, who are the honest, earnest, true exponents and defenders of such measures. With such co-operation

between the English people and their representatives in Parliament the death rate has fallen in twenty years from 26 to 7 per 1,000.

At the present day, when important, wonderful truths are being evolved by the earnest, patient study of the human system in health and disease—its physiology and pathology—we cannot but feel more than grateful for their labors for humanity, and are amazed at the light which is now made to radiate upon the nature, cause and effect, and treatment of many diseases which in times past have always been shrouded in deepest mystery. The labors of the French, German, English and American physicians engaged in the field of medical science have not only weaved for themselves a wreath of professional glory, but by their labors have made themselves benefactors for the whole civilized world.

Should these professors of medicine and sanitation succeed in their investigations and experiments in unfolding the true nature of tuberculosis, hydrophobia and other kindred diseases, and reveal the means by which to prevent as well as to relieve them, then will every man, woman and child in the whole civilized world rise up and call them blessed evermore.

Our neighboring State, Florida, during 1888, the year of her sore affliction, has given us a solemn warning to prepare for the invasion of our State by yellow fever and other epidemic and contagious diseases by the use of strict quarantine measures, strictly, prudently and timely applied by those authorized to use all such means as will accomplish the great object in view—to prevent the introduction and distribution of epidemic or contagious diseases in our State.

It is a source of comfort and congratulation to the State Board of Health that the quarantine measures put into practice by the State Quarantine, and that of the city of Charleston in 1888, proved highly practical in protecting our State against yellow fever in Florida. And again, they rejoice to know that whilst our neighboring State, Georgia, has been afflicted with yellow fever, with the great loss of trade and commerce and many valuable lives, South Carolina, by a proper and timely use of the measures authorized and applied by the authorities, has so far been enabled to protect our State against such invasions.

The history of such cases, derived from the fields of practical labor applied by quarantine measures, should now and hereafter, as well as in the past, the more fully satisfy the minds of all doubtful men in regard to quarantine organizations as to the utility and practical ability of such organizations. Surely such doubting minds cannot, could not, with such facts before them now, resist the truths as developed by the work of quarantine organizations; and as such organizations do pro-

tect the State against the invasion of all epidemics or contagious diseases, then surely the Legislature will view this field of labor free from prejudice and extend to such a State organization such financial aid as will enable such organization to enter upon its work with a zeal, earnestness and practical utility as will enable them to perfect their work under all difficulties, and thus protect the commerce of our State as well as the health and lives of the people—"a consummation devoutly prayed for ;" may it be "so, now and evermore."

The Committee on State, Penal and Charitable Institutions, of which Dr. A. A. Moore is Chairman, again presents a most encouraging Report as to the Asylum for the Deaf, Dumb and Blind, under the care of Superintendent Walker, to whose continued kind care and keeping this institution, with its Christian work in view, has been for many years assigned and whose labors in the same field have proved so successful and gratifying.

As to the Penitentiary, during the past year no material changes have taken place since the enlargement of the hospital building. The Medical Department, under the control of Dr. Pope, whose professional skill has, in the past as well as preceding years, been devoted to the physical comfort of the inmates and at the same time has given full satisfaction to the officials of this institution.

The same unsatisfactory arrangements as to separate buildings in this institution, as well as in the Lunatic Asylum, still exist.

No changes in the buildings for the whites have been made in the past. The separate building for the colored inmates, so often and urgently recommended by the Superintendent as well as by the State Board of Health, has not been erected.

The State Quarantine Committee, Dr. T. G. Simons, Chairman, to whom the State Board of Health looks with much anxiety for protection against the invasion of our State by epidemic and infectious diseases, still receives the earnest attention and watchful anxiety of the Board of Health. It is again most gratifying and encouraging to every member of the State Board of Health that the organization of the State Quarantine Board and its strict, practical rules applied at the proper times and places has been the only practical means by which the city of Charleston and her neighboring cities have been exempt from infectious diseases by foreign importation since 1871. This Committee, directed by its Chairman, Dr. Simons, and sustained by the State Board of Health, has been the source of untold blessings to the people of South Carolina by its earnest discharge of its duties in its respective fields of labor in which it has so long labored.

The State Board of Health regrets to report the cold indifference of the local sub-Boards of Health throughout the State on the subject of local epidemic—infectious diseases—from which want of public sentiment and action as to their duties in such fields of their professional labors have, we regret to say, been a great obstacle to the Chairman, Dr. Taber, of the Committee on Epidemic and Endemic Diseases, in making his full report to the State Board of Health. To excite an interest and a sense of duty among the local sub-Boards of Health, there has been presented a set of resolutions by Dr. Evans on this subject—which were discussed by the State Board and recommended to be presented to the General Assembly—calling their earnest attention to and favorable consideration of their great importance to the people of every section of the State, trusting that the intelligence, moral and humane sentiment of the General Assembly will see the necessity of adopting the views embraced in said report and give the same such vitality as will satisfy each member as to the necessity of favorable action on the same.

In this Annual Report it becomes my privilege and duty to call the attention of the General Assembly to the fact that, on account of the cyclone on August 27, '93, the following property was so much injured as to require immediate repairs :

Wharves and buildings at St. Helena.....	\$1,200
Wharves and buildings at Paris Island	600
Total	\$1,800

Also, printing and distribution of sanitary publications by the Board of Health, \$500. And again I would call to the attention of the General Assembly that however much zeal and public feeling the members of the Board manifest in the sanitary welfare of the State, and give their time, professional experience and scientific knowledge in advancing the hygienic condition of every section of the State, frequently leaving their professional work for days at a time, involving actual pecuniary loss to themselves, they feel that it is not asking too much of their fellow citizens to make such appropriation for the honest, sole uses of the Board as will make them feel that in their work as a State Board of Health they are in that capacity on a level with their brethren of other States similarly engaged. This position they can not attain with the limited means at their disposal. A volume of their reports, creditable to themselves and of great use in the sanitary literature of the State, and which, when distributed among the Boards of other States would be acknowl-

edged by an exchange of other reports, still advancing the interests of the whole people of the State.

With the past appropriation of only \$1,500 the State Board can only publish a meagre Report for the use of the members of the Legislature. The State Board is expected to keep up, if not surpass, their professional brethren in other States in the practical knowledge of hygiene which only can be obtained by intercourse with the peers of the profession, for among such there is community of thought and strength in the shoulder-to-shoulder touch, in sanitary as in military affairs, acquired not alone from books.

The Board can only pay the Secretary \$500 per annum for his work, much of which is clerical and for the use of his office, all of which is less than that paid to secretaries for similar work in other Boards of Health.

Again for the same reason (the want of means properly applied) the Board is unable to have the various analyses made, for the work of chemists is expensive, as well as their apparatus and material. They cannot employ a suitable engineer to tell them in what point our school houses and other public buildings are defective, the necessity of drainage of certain localities, or changes necessary in draining of other sections.

They have not the means to send a committee to inspect certain sections where pestilence threatens, and to instruct the people of the cause of same and suggest the remedy. The maritime quarantine stations should be inspected annually to preserve their efficiency. This they cannot do for the want of means. For the above and various other reasons I would again most earnestly and respectfully urge upon the General Assembly to raise the present annual appropriation from \$1,500 to \$2,500, thus stimulating the State Board of Health in the work before them and enabling them to perfect their work in a manner more profitable to the State and satisfactory to themselves.

Respectfully submitted,

J. R. BRATTON, M. D.,
Chairman Executive Committee State Board of Health.

MINUTES OF MEETING JANUARY 10th, 1893.

The regular quarterly meeting of the Executive Committee State Board of Health was held in Charleston at the office of the Secretary on the 10th of January, 1893, at 12 o'clock, the Chairman presiding. The following members were present, viz.: J. R. Bratton, M. D.; A. A. Moore, M. D.; Jas Evans, M. D.; C. R. Taber, M. D.; W. H. Nardin, M. D.; Hon. W. H. Ellerbe, Comptroller-General; T. Grange Simons, M. D., and H. D. Fraser, M. D.

The minutes of the last meeting were read and confirmed. An election for officers of the Executive Committee being held, the present incumbents, viz.: Dr. J. R. Bratton, Chairman, and Dr. H. D. Fraser, Secretary, were re-elected to fill said offices for the ensuing year. An election for Quarantine Officer at Georgetown resulted in the election of Dr. J. Wm. Folk for appointment by the Governor to the position for the next term.

The Secretary was instructed to pay the Treasurer of the Conference of State Boards of Health \$30, that being the amount of assessment levied by the Conference of each State Board of Health for the inspection of the various quarantine stations in the United States and Canada.

On call for letters of correspondence, the Secretary presented the memorial of the Louisiana Board of Health in opposition to the Bill now before Congress providing for the establishment of a National quarantine system. After some discussion the following resolution was adopted :

“Resolved, That the State Board of Health of South Carolina fully concurs with the State Board of Health of Louisiana in their memorial addressed to the Senate and House of Representatives of the United States, now assembled in Washington, and in their opposition to the Bills to regulate quarantine; and they, the State Board of Health of South Carolina, desire to enter their official protest against the passage of the same, and we do urge upon our Senators and Representatives in Congress to oppose such measures.”

The Secretary was instructed to communicate with our Senators and Representatives in Congress and to convey to them the above protest and resolution.

Dr. C. R. Taber then stated that he had been requested by certain citizens of Ellorre Township, Orangeburg County, to use his influence to prevent the making of a fish pond, which was in contemplation in their neighborhood.

Dr. Simons moved that Dr. Taber be requested to advise with the citizens of Elloree Township, and that a selection be made for appointment of a Board of Health of Elloree, and that the Secretary of this Board issue the commissions to said Township Board of Health.

On motion, it was resolved that the health circulars issued by this Board be published in the next (1893) Annual Report to the Legislature.

On motion, it was resolved that the publication of the Circular on Cholera (No. 12) be left to Dr. Evans.

Dr. Simons, Chairman of the Committee on Quarantine, reported the action of his Committee relative to the appointment of inspectors along the lines of railroads for the purpose of guarding the State against the entrance of cholera. The report was received and in the matter of the expenditure of the contingent fund, with which these inspectors were to be paid, Dr. Simons was requested to go to Columbia and in a special interview with the Governor to try to explain the whole matter with a view to its adjustment.

On motion, the meeting then adjourned to meet in Sumter at the time of the Annual Meeting of the State Medical Association.

H. D. FRASER, Secretary.

April 18th, 1893.

The regular quarterly meeting of the Executive Committee of the State Board of Health met at the Masonic Hall, Sumter, S. C., April 18, 1893, at 12 M. The following members were present, viz.: Drs. James Evans, A. A. Moore, W. H. Nardin, C. R. Taber, T. Grange Simons. Dr. James Evans was on motion, requested to act as Chairman *pro tem.* and Dr. Simons as Secretary. The minutes of the January meeting were read and approved. Dr. Howell, of North Carolina, a visitor to the South Carolina Medical Association, appeared before the Committee and requested that the Board of Health of the two States would act in co-operation as to protective measures against cholera, and hoped that some of the South Carolina State Board would attend the August meeting of the North Carolina State Medical Association and State Board of Health. After some important discussion on the work of the Board, it adjourned until 10 A. M. April 19th.

Dr. J. R. Bratton, who had arrived, assumed the Chair. A letter from the Secretary, Dr. Henry D. Fraser, was read regretting his enforced absence on account of continued ill-health. Dr. C. R. Taber offered the following resolutions, which were unanimously adopted :

Resolved, That we deeply regret the absence of our Secretary, Dr. H. D. Fraser, and while sympathizing with him in his painful sickness, we hope that God in His goodness may soon restore him to health, and that he may continue his useful services to the Board and the State.

Resolved, That the acting Secretary, Dr. T. G. Simons, transmit to Dr. Fraser the foregoing resolution.

Dr. Simons reported that through the exertion of the Hon. W. H. Ellerbe the Governor had signed the Bill paying the Railroad Medical Inspectors who served during the alarm of cholera in September and October, 1892. The matter of having legislative action exempting members of the local Boards of Health from jury and road duty was discussed. This measure was lost in the last General Assembly by only a few votes. Dr. Evans proposed that the Board issue monthly bulletins, as were issued by other State Boards of Health, and containing much information of interest and value to farmers and families. Dr. Evans was requested to report as to the feasibility of this at the next meeting.

The Board adjourned to meet in July at Anderson, S. C.

T. G. SIMONS, M. D.,

Secretary *pro tem.*

Anderson, S. C., July 20th, 1893.

The regular quarterly meeting of the Executive Committee State Board of Health was called to order at 12 M. The following members were present, viz.: Dr. J. R. Bratton, Chairman; Drs. Evans, Taber, Nardin and Simons. The Chairman read a letter from Dr. H. D. Fraser regretting his absence on account of continued illness, and stating that Dr. Simons would act as Secretary. The minutes of last meeting were read and confirmed. Dr. Evans requested further time to report as to the issue of a monthly bulletin by the Board of Health. Granted. Dr. T. Grange Simons spoke of the great danger menacing the health of the people of the State from unsound and adulterated food supplies. He thought that some aid might be derived by requesting analyses from the Faculty of Clemson College, and the Professor of Chemistry at least might make such analyses when requested by the Board of Health as would expose the adulteration and impurities of food products. Dr. C. R. Taber moved that the Acting Secretary be instructed to correspond with the Professor of Chemistry of Clemson College requesting their aid in detecting such dangerous food supplies. Dr. Simons also stated that he feared some

complications might arise from conflict between the State Quarantine rules and those of the United States Marine Hospital Service, and requested the advice of the Attorney-General, as he might give some information. The rules of the United States Marine Quarantine Service required the acceptance by all State and local quarantine authorities of the minimum requirements as to quarantine regulations, but allowed additional requirements by State and local authorities. This *quasi* recognition of State and local authority was to a certain extent limited and might engender trouble. The United States Marine Hospital Service had but few men qualified as experienced in quarantine administrations, especially in yellow fever detention.

The matter of exemption of members of local Boards of Health from road and jury duty as an incentive to better service was also discussed, and also of increasing the number of local Boards so as to subdivide the work into several committees was also discussed.

Dr. Evans gave a most interesting account of the dry earth and pail system of night soil as now in use at Florence. The emptying and removal of the parts or boxes was carried out by persons appointed by the municipal authorities. Each householder was taxed 15 cents per month, and the farmers bought it for fertilizers, and the persons engaged in collecting and removing it had found they could conduct the business with profit. The sanitary advantages were markedly better than any other method used before. Dr. Evans also dwelt upon the necessity of legislative action requiring inspection of school houses and jails of the State, as the health of prisoners were subjected to serious dangers by the lack of sanitation in the several jails.

The General Assembly should be requested to empower the Executive Committee of the State Board of Health with power to inspect jails and school houses in the State. Dr. Evans also stated that he had published a large number of circulars on cholera. The Secretary was instructed to send a copy to each member of the General Assembly of the State. Sanitary talks at the Summer School Institutes were also discussed.

No further business presenting itself, the Board adjourned, and in a body visited their widow of their late fellow member, Dr. P. A. Wilhite.

T. GRANGE SIMONS, M. D.,
Secretary *pro tem.*,
FOR HENRY D. FRASER, M. D., Secretary.

Minutes of Meeting of the Executive Committee of South Carolina State Board of Health, Held October 29, 1893.

The regular quarterly meeting of the Board was held at the hall of the Medical Society of South Carolina at the Roper Hospital, Charleston, at 12 M.

Present : Dr. J. R. Bratton, Chairman ; Drs. James Evans, A. A. Moore, W. H. Nardin, T. Grange Simons.

Owing to the continued illness of the Secretary, Dr. Fraser, Dr. Simons was requested to act as Secretary. The minutes of the July meeting were read and confirmed.

Unfinished Business.—Dr. Simons stated that he had not yet completed any arrangements as to analyses of adulterated and unsound food supplies, and requested further time. Granted.

Dr. James Evans reported upon the imperfect organization of the several sub-Boards of Health, and that while the State Board was charged with the organization of local Boards and maintaining public health, it has no power to enforce rules or to collect data as information. He then presented the copy of a Bill to be discussed by the Board, and if approved to be sent to the General Assembly for enactment. After considerable discussion and some additions and changes, the Bill was adopted, and Dr. Evans was requested to prepare it in proper shape for presenting to the State Legislature.

Dr. Evans also stated that he had issued — copies of the tract upon the "Prevention of Cholera." That it was highly important that the Legislature continue the appropriation for the issuing of other much needed information to people in regard to the preventive in case of disease. Five hundred dollars was regarded as enough to continue the work. The Board adopted his report and the Chairman was requested to embody in his Report to the Governor and Legislature the request.

The report of the Committee on Quarantine was read and the several suggestions acted upon and ordered to be printed.

The report of the Committee on Penal and Charitable Institutions was also made, and Dr. Moore was requested to elaborate it for printing.

Adjourned to meet in Charleston in January, 1894.

T. GRANGE SIMONS, M.D.,
Secretary *Pro Tem.*

**List of Exchanges Received from November 1, 1892, to
October 31, 1893.**

Biennial Report of the State Board of Health of California from June 30, 1890, to June 30, 1892.

Catalogue Index of the Library of the Surgeon-General's office, Vol. XIII.

Report of the State Board of Health of Massachusetts, 1891-92.

Report of the Health Officer of the District of Columbia for 1891.

Fourth Annual Report of the Health Department of the City of Mansfield, Ohio, for the year 1891-92.

Report of the Sanitary State of the City of Montreal for the year 1891.

First Annual Report of the Board of Health of the State of Washington, 1892.

Biennial Report of the Secretary of the State Board of Health of West Virginia, 1891-92.

Biennial Report of the Territorial Board of Health of Oklahoma to December, 1892.

Report of the Ohio State Board of Health for 1891.

"A National Quarantine System Essential to the Safety of Our People" being a report of the special committee of the New York Board of Trade and Transportation.

Tenth Biennial Report of the North Carolina Board of Health, 1891-1892.

Annual Report of the State Board of Health of Connecticut to June, 1892.

Annual Report of the Health Department of the City of Baltimore to December 31, 1892.

Sixth Annual Report of the Agricultural Experiment Station of the University of Nebraska to December 29th, 1892.

Advance sheets of the Seventh Annual Report of the State Board of Health of Ohio, 1892.

Third Biennial Report on the Vital Statistics of the State of Minnesota for years 1890-91.

Sixteenth Annual Report of the Board of Health of New Jersey, 1892.

Bureau of Animal Industry (Texas Fever) from U. S. Department of Agriculture.

The Book of the Rules of the Medical Association of Alabama (with Appendix).

Fourth Annual Report of the State Board of Health of Florida, 1893.

Transactions of the New York Academy of Medicine, Vol. VIII., Second Series.

Eighteenth Annual Report of the State Board of Health of Michigan to June 30, 1890.

Eleventh Annual Report of the New Hampshire State Board of Health to October 31, 1892.

Annual Report and Abstract of the Maine Hospital Report.

Index of the Library of the Surgeon-General's Office, Vol. XIV.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Ninety-fourth Annual Session, November, 1891.

CONDENSED STATEMENT OF RECEIPTS AND EXPENDITURES OF THE APPROPRIATION FOR THE USE OF THE STATE BOARD OF HEALTH FOR THE FISCAL YEAR ENDING OCTOBER 31ST. 1893.

RECEIPTS.			
1892.			
November	1.	By Balance.....	\$ 292 50
December	1.	Amount transferred from State Med. Ex. Board.....	14 17
1893.			
January	5.	By amount received from Comptroller-General.....	375 00
April	3.	By amount received from Comptroller-General.....	375 00
July	7.	By amount received from Comptroller-General.....	375 00
October	7.	By amount received from Comptroller-General.....	375 00
		Total	\$1,806 67
EXPENDITURES.			
1892.			
November	7.	To paid H. B. Baker, Treasurer Nat. Confer. S. B. H...	\$ 10 00
December	9.	To paid A. A. Moore for inspecting State Penal and Charitable Institutions.....	39 60
1893.			
January	10.	To paid expenses and per diem of members for meeting held in Charleston.....	195 00
January	13.	To paid J. E. Tindal, Secretary of State, for two certified copies of Acts.....	2 87
February	1.	To paid News and Courier for one year's subscription.....	10 00
"	20.	To paid H. B. Baker, Treas. Nat. Confer. S. B. H.....	30 00
"	20.	To paid postage for one year.....	5 62
March	2.	To paid expressage for express from Connecticut.....	45
"	11.	To paid for book shelves for exchanges.....	2 25
April	23.	To paid A. B. H. A. for three volumes Annual Reports.....	15 00
	19.	To paid expenses and per diem of members for meeting held in Sumter.....	172 00
July	20.	To paid expenses and per diem of members for meeting held in Anderson, S. C.....	146 60
August	24.	To paid T. Grange Simons for telegrams on account of S. B. H.....	20 00
October	24.	To paid expenses and per diem of members for meeting held in Charleston, S. C.....	166 95
"	24.	To paid A. A. Moore for inspecting State and Char. Insts.....	60 15
"	24.	To paid expressage circulars to Babcock.....	30
November	1.	To salary of Secretary from November 1st, 1892, to November 1st, 1893.....	500 00
"	7.	To paid expressage State Board Health Reports.....	35
		Balance on hand.....	429 53
		Total	\$1,806 67

H. D. FRASER, Secretary.

REPORT OF COMMITTEE ON QUARANTINE.

T. GRANGE SIMONS, M. D., CHAIRMAN.

To the President and Members of the Executive Committee of South Carolina State Board of Health:

The quarantine season now drawing to a close has been one of anxious care and misgiving to those connected with the preservation of public health. Cholera is again rampant in Eastern and European countries, and steadily extends its march in the course of trade and travel. Yellow fever has been of greater violence in Santos, Brazil, than for many years. Other South American and Spanish West India ports have also had severe epidemics. Reports of the existence of the disease also in Florida prevailed and gave grave cause for apprehension as to its spread. Our sister State of Georgia is now in the toils, as it exists in several places. When it was definitely ascertained that yellow fever had arrived at Brunswick, we felt that a most vulnerable place was to be dealt with, and with anxious care hoped that modern sanitation, disinfection and early isolation of the first patients, with the destruction of infected material as attempted by those in charge, would have been productive in good results and the disease stamped out and danger to the country averted, that detention camps would have been early occupied by the entire population, who were not inured to the disease, and thus the fuel to feed the epidemic removed, and that after a safe period of probation and with proper disinfection of all personal baggage and effects, those who had passed through the detention camps could have with safety been allowed to enter other communities without danger to those who received them in their great distress; the horrors of the shotgun quarantine and the great sufferings of the fleeing refugees, spurned and avoided by all who, in protecting their communities, felt impelled by public necessity to keep the refugees moving on. Even with the armed cordons and patrol boats, and with vigilance and care, refugees have escaped and carried the disease to several islands and communities near Brunswick; and now, with infection lurking in scattered and widely separated localities, the process of disinfection and destruction of infected material has to be carried out with no reasonable prospect that any agency will accomplish any result, and that the advent of cold weather alone is to bring any arrest of the disease, and to the charitable people of the land is devolved the sacred duty of providing for those who are destitute—whose employment has been destroyed by the closure of their marts—and

whose trade and industries have been paralyzed by the presence of the dread disorders. The several cities and towns of our State have undertaken to protect themselves by having inspectors on the several railroad trains leading into their communities. The right of municipal officers to prevent travel and to arrest those attempting to enter the cities from infected regions has been questioned, and applications were made to his Excellency the Governor, to commission these Sanitary Inspectors, thus giving them full power under the State Statutes relating to Land Quarantine. This protective system has worked well, and has served to prevent anxiety, and also to suppress in a great degree the rumors so often prevalent. Such rumors often originate from thoughtless remarks that gain credence and are magnified by those who repeat them, and it is even asserted that commercial agents have made use of such false reports to divert trade from cities and secure orders for merchandise for houses out of the State. The ill effects of such slanderous reports can well be judged, and some heavy legal penalties should be provided for to punish those who originate or circulate such false and injurious reports.

The gale of August 27th, 1893, will ever be remembered by those who were exposed to its force. We do not propose to dwell upon the destruction of life and property. This sad duty has been performed, and the harrowing tale of suffering and loss has been borne through the land. It, however, will be our duty to allude to the losses at the several quarantine stations, as it will be necessary to present to the General Assembly of South Carolina an appeal for an appropriation to restore the buildings, wharves and boats destroyed or damaged. The several reports from the quarantine physicians will show how faithfully they have discharged any duty and the great danger to which they all have been subjected to at remote and exposed positions, for the several stations, to afford security from danger of introducing disease to our people, have necessarily been located at places exposed to the full fury of wind and waves. It will be observed that each of them report the fact of great destruction around them, but none of them allude to the great dangers to which they were all exposed. They each deserve the gratitude and appreciation by our people for their unselfish devotion to arduous duty. Each of them have endured heroically much privation and loss of personal effects. I commend them to the consideration of the Board.

POR T OF GEORGETOWN.

The services here have been faithfully discharged by Dr. Folk, whose report is appended. On the 18th of August a telegram was received

from Surgeon-General Wyman, U. S. M. H. S., informing us that the schooner Lister was at the State Quarantine Station at Philadelphia from Georgetown, having left that port August 3rd and arrived August 15th with three (3) cases of yellow fever on board. I telegraphed Dr. Folk and Dr. Wyman for full particulars relative to the vessel and her previous ports of entry. No fever of a suspicious nature had existed at Georgetown, nor am I aware that yellow fever has ever prevailed there. The vessel left Philadelphia July 24th and lay opposite a rice field near Georgetown for some time previous to her return to Philadelphia. Part of her water supply was also obtained at or near her anchorage; the locality was highly malarious.

The schooner sailed from Georgetown August 3rd and on the 6th or 7th of August the first of her crew was taken with a chill followed by fever; on the 12th and 13th the other two men sickened; all arrived at Philadelphia. They were extremely prostrate, had fever, gastric irritability and were jaundiced, common conditions in malarial fever. From the meagre clinical history furnished Dr. Wyman by the Quarantine physician, I fail to see any diagnostic evidence of yellow fever, nor does it appear that the urine was tested for albumen, nor was any divergence between the pulse rate and temperature, so important to note in establishing a diagnosis of yellow fever. I telegraphed Dr. Wyman my opinion, formed from the information I obtained and the locality in which the vessel was anchored, that the disease was malarial, and requested him to obtain full clinical histories of the cases, and also the history of the vessel and the lists of ports of entry within the preceding year. I have not been furnished with a reply.

The tornado of August 27th inflicted heavy injuries to the residence and outbuildings of the Quarantine Physician. I wrote to Dr. Folk and authorized him to repair the losses and place his station in a condition of efficiency as soon as possible, and to use the funds he had. This was done, and his vouchers for expenditures are transmitted for your approval. The storm of October 9th has again swept over the station and destroyed boat and boathouse and again injured the buildings; the extent not yet fully ascertained. I would suggest that a storm insurance be effected upon the several stations.

CHARLESTON STATION.

The Report from the Board of Health leaves me nothing to say, and it is presented with this Report.

QUARANTINE STATION, PORT OF GEORGETOWN,
SOUTH ISLAND, S. C., October 2, 1893.

*Dr. T. GRANGE SIMONS, Chairman Quarantine Commission S. B. H.,
Mr. President and Members State Board Health.*

GENTLEMEN:—In submitting this my annual report I am pleased to state that a kind Providence has again exempted this port from an invasion of all contagious diseases. I promptly treated all arrivals from suspected ports and with our present system of quarantine laws rigidly enforced, our grand old State will continue to be exempt from depopulation by an epidemic of cholera, yellow fever, smallpox and typhus fever. The sad lesson of Brunswick, Georgia, by present scourge of yellow fever, should ever be present in our minds and instill within us renewed energy to be on the watch-tower at all times, for we know not at what hour the enemy may knock at our ports, even in disguise; that we may be prepared to bid defiance to the destroyer of many lives, bright, prosperous cities, and that happy homes may remain intact.

The storm of August 27th wrought considerable damage to our quarantine property. Huge trees in numbers were blown down, premises covered with debris, palings succumbed to the fury of the storm. The dwelling, surrounded with mountains of sand hills, a few feet away to the South and Southwest, only the roof visible, the house covered with sand to top of balusters. I have succeeded in clearing up the enclosed premises of all debris, removed sand six feet from around dwelling, allowing sills once more to be seen, replaced palings, erected a brush fence on sea side as a sand-catcher, and used disinfectant freely. The entire Quarantine premises present a tidy appearance. These huge mountains of sand hills should be removed. I would suggest a boat house be built, as my own private one was swept away.

Very respectfully,

J. WM. FOLK, M. D.,
Quarantine Officer Port of Georgetown, S. C.

CITY OF CHARLESTON, S. C.,
DEPARTMENT OF HEALTH, October 1, 1893.

T. GRANGE SIMONS, M. D.,

Chairman Quarantine Committee, State Board of Health of South Carolina.

DEAR DOCTOR:—I am requested by Mr. T. R. McGahan, Chairman of the Board of Health of Charleston, to acknowledge the receipt of your note requesting the usual annual report as to Quarantine matters, and to answer the same, October 1, 1892, to October 1, 1893. There has not been during this period a single case of contagious or infectious disease at the Station.

Doctor Lebby, Quarantine Officer, has carried out the rules and regulations as prescribed with zeal and fidelity.

Some changes have been made in our regulations to conform to the Act of Congress passed February 15, 1893.

We have given permission to fruit vessels to come to Charleston without detention from a fruit port where a medical officer has been sent who furnishes the vessel with a certificate of freedom from yellow fever at the port of departure. The Medical Officer appointed by the Board of Health.

Since our last report the quarantine plant at Fort Johnson has been in constant use, giving entire satisfaction. Our plant is up to every recent requirement for scientific maritime sanitation and fulfills its mission without break or hitch. During the past year a neat and convenient office has been erected immediately at the Quarantine Station, close by to the fumigating and steam cylinder building. This building was put up to take the place of the old office, which was at some distance away, and which was not conveniently located. Our entire plant has been overhauled and repaired during the past year—machinery, buildings, wharves, railroad tracks, etc., and put in complete order.

The Station was visited by the cyclone of August 27. Considerable damage was done to fumigating building and some of the machinery. The wharf also suffered. This damage will be covered by a cyclone policy of insurance. Through the quick energy of the chairman, Mr. H. T. McGee, sufficient repairs were immediately done so that no interruption occurred as to fumigating, etc.

The repairs required for a thorough restoration are now being carried out.

Dr. Lebby also reports some damage done to the hospital and lazaretto keeper's house. These repairs will be done as soon as possible. I beg to enclose financial report and all reports of all arrivals at the Station.

Yours respectfully,

H. B. HORLBECK, M. D.,
Health Officer and Secretary of the Board of Health.

VESSELS ARRIVING AT PORT OF GEORGETOWN, S. C., FROM OCTOBER 1st, 1892, TO OCTOBER 1st, 1893.

Name of Vessel.	Date of Arrival.	Where From.	Destination.	Treatment Vessel and Cargo.	Number Crew.	Number Passengers.	General Remarks.
Schooner Elanor.....	October 3, 1892.	New York.	Georgetown.	Passed.	7	None.	All well.
Steamship Croatian.....	October 4, 1892.	New York.	Georgetown.	Passed.	19	None.	All well.
Schooner Warren B. Potter.....	October 7, 1892.	Philadelphia.	Georgetown.	Passed.	7	None.	All well.
Schooner L. C. Kaminski.....	October 12, 1892.	New York.	Georgetown.	Passed.	8	None.	All well.
Steamship Pawnee.....	October 12, 1892.	New York.	Georgetown.	Passed.	18	None.	All well.
Schooner Mark Gray.....	November 4, 1892.	Cardenas, Cuba.	Georgetown.	Detained five days, fumigated and disinfected.	7	None.	All well.
British Schooner A. B. Crosby.	May 28, 1893.	New York.	Georgetown.	Ballast deposited under water, fumigated and disinfected.	7	None.	This vessel prior ports said to be unknown to present master, but I was fully satisfied she was a regular W. I. trader.
Schooner A. S. Snare	September 1, 1893	Curacao, W. I.	Georgetown.	Detained five days, fumigated and disinfected.	6	None.	All well, clear bill of health.

RECAPITULATION.

Steamships.....	2
Schooners.....	6

Respectfully submitted,

J. WM. FOLK, M. D.,
Quarantine Officer Port of Georgetown, S. C.

TABLE OF ARRIVALS AT QUARANTINE, CHARLESTON, S. C., FROM
OCTOBER 1ST, 1892, TO OCTOBER 1ST, 1893.

RECAPITULATION.						
	Total in Month	Diseases.	Schoniger.	Total Fumigated	Direct.	Indirect.
1892.—October.....	39	26	4.....	9	19	8
November.....	16	8	2	4	6	92
December	13	5	3	1	4	71
1893.—January.....	19	7	8.....	4	5	12
February.....	15	5	7.....	3	7	—
March.....	10	8	2	2	3	175
April.....	12	.....	5	1	6	—
May.....	10	1	6	1	2	—
June.....	10	5	4.....	1	3	—
July.....	8	2	5.....	1	3	—
August.....	9	1	5	1	2	—
September.....	14	8	3.....	3	7	—
Total.....	175	71	54	8	42	68

*Cholera.
†Yellow fever.

ST. HELENA AND PORT ROYAL STATIONS.

The reports of Dr. Sams and Dr. Stuart, transmitted by the Township Board of Health of Beaufort, show the great dangers through which these stations have passed and the heavy damage inflicted, especially the St. Helena Station, on Buzzard's Island, where the wreck is complete and much loss of household and personal effects of the physicians, and the boat crews who escaped only with life. It will be necessary to apply to the General Assembly of the State for an appropriation to restore and rebuild the wharves and buildings destroyed. The report of Dr. Allen Stuart, with his comments upon the Holt System and the equipment of his station with a suitable plant for marine sanitation is highly desired, and was urged by your Committee in a previous report. This steam disinfecting apparatus could be so located as to be convenient for the use of both of the stations at St. Helena and Port Royal, and with the near prospect of increased foreign trade with the latter port, it would be most useful and of material advantage to commerce in diminishing the period of detention of vessels, a consideration of no small financial advantage to large ocean ships. We most earnestly invite your attention to the advantage of such system, and trust the Legislature will grant the necessary appropriation.

BEAUFORT, S. C., October 9, 1892.

DR. T. GRANGE SIMONS, *Chairman Quarantine Commission, State Board of Health.*

SIR: I have the honor to hand you the reports of the two officers in charge of the Quarantine Stations of Port Royal and St. Helena. I have little to add to them, except to request you to assist us in procuring from the Legislature an appropriation to put these stations in the condition they were before the great storm. Our Governor is aware of our needy condition—having inspected one, if not both of the stations, and seeing the necessity for urgent and immediate action to render them temporarily habitable, promised to do what he could to assist us. The estimates handed him covered only expenses necessary to put the buildings in such condition that the Health Officers can live in them—nothing more. With the prospect Port Royal has in view of improvements and increased foreign shipping, the necessity for the expenditure of certain sums of money becomes very urgent. There is no ballast wharf, nothing that could be called such, under the control of the health officer. This is considered an absolute necessity; and I think you will agree with me in thinking that if the foreign shipping increases at this port it will be necessary that a Holt's system of disinfecting be established.

I am glad to state that contrary to the expectations of chronic croakers no sickness has followed the storm. I say it with thankfulness up to this date less sickness prevails in the towns of Beaufort and Port Royal than is usual at this season of the year. As a natural consequence there is some sickness in the surrounding country among the colored people, who have lost their houses and are consequently crowded together and are compelled to drink impure water, and for a period lived in an atmosphere contaminated by decomposing animals drowned by the storm. This trouble was soon removed by the wise and energetic action of Dr. Magruder, of the Marine Hospital Service, he having established competent sanitary inspectors at various points, has really accomplished a wonderful amount of good, thereby lessening the amount of sickness to a great extent. Trusting that when our Legislature meets they will see the necessity for coming to our assistance, and that the State Board of Health will ably second our efforts.

I remain very respectfully,

H. M. STUART, M. D.,
Chairman of Board of Health.

BEAUFORT, S. C., October 22, 1893.

To DR. T. GRANGE SIMONS, *Chairman Quarantine Committee State Board of Health.*

SIR: In my Report to the State Board of Health I could not make an exact report of the amount necessary to repair the two Stations of Port Royal and St. Helena. When the Governor visited the Sea Islands, after the storm of August 27th, he said if "he could possibly do so he would let us have money enough to put the dwelling houses in such condition that the officers could be made comfortable." As yet nothing has been done. On Buzzard Island the officer, boat hands and servants are crowded in two rooms; the rain pours into these rooms, and the condition beggars description. The hospital building, with its outfit, at the time of the storm in perfect condition, is almost entirely destroyed, although some of the lumber is saved; neither is there a vestige of the outbuildings left. At Port Royal the destruction has not been nearly as great; the dwelling was partially unroofed, and so were some of the outbuildings. The foundations of the houses require strengthening, owing to the damage done by the wind and waves. The wharves were destroyed at both Stations, and at Port Royal a ballast wharf is absolutely necessary.

It would be an act of supererogation on my part to lay stress upon the necessity for the repairs of the Stations. The good done to the country by properly regulated quarantine service has been made so evident in late years that I feel that I would be wasting time to say anything on the subject, consequently I will simply append the statement of amounts necessary to re-establish the Stations somewhat to their former condition, trusting that each member of the State Board understanding that this appropriation is asked not for local benefit alone, but for the good of the entire State, and I may say further, for the protection of the country at large.

I will take the liberty of calling your attention to the following fact: That it cost over three thousand dollars to put the buildings and wharf up that constituted the St. Helena Station, on Buzzard Island; of that amount the State did not contribute anything toward defraying the expenses, but it was paid for by the taxes paid by the shipping that entered St. Helena for phosphate rock. Now the picture is entirely reversed, for some time at least. Until the phosphate business begins to improve the Station will not be able to pay its running expenses; yet the officer in charge will be obliged to observe the same vigilance over the few ships that will enter as formerly he did over the many. Some lumber and bricks have been recovered from the hospital building and the wrecked dwelling house, saving thereby so much in this direction.

By close economy, we calculate that we can rebuild this Station, putting it in fair condition, by having \$1,200 appropriated for that purpose.

The Port Royal Station has not suffered as much as St. Helena has. We calculate that the roof can be replaced on the dwelling house and the outbuildings and the foundations of the houses rebuilt, the cisterns repaired and the wharf built for \$600. Total for the two Stations, eighteen hundred dollars (\$1,800).

Very respectfully,

H. M. STUART, M. D.,

Chairman Township Board of Health, Beaufort Township.

BEAUFORT, S. C., September 26, 1893.

H. M. STUART, M. D., *Chairman County Board of Health.*

DEAR SIR: For the fiscal year 1892-93, I beg to report that this Station has been particularly exempt from serious diseases of any character, nothing of a malignant type having been introduced by shipping, and the country in our immediate neighborhood practically free from disease.

On the 27th of August the Quarantine Station and surrounding country was visited by a hurricane of unprecedented violence. By midnight of same date it developed irresistible force of wind and water, sweeping from the Station nine buildings, leaving behind only a part of the hospital and the body of the officers' quarters, and that in a badly dilapidated state. The wharf shared the fate of the other property on the island, a few upright pieces alone now showing where it once did service. The boats are likewise much injured.

In view of this, I would earnestly call your attention to the necessity of repairing and rebuilding the property at the earliest practicable moment, at least to the extent of securing health and some degree of comfort for Physician and employees at the Station. These conditions do not now exist, as you doubtless understand from reports which I have made, both to your Board and to his Excellency Governor B. R. Tillman, who seems fully to appreciate the situation, and judging from his conversation with me, is disposed to apply the needful relief by a small appropriation of money, if practicable. I have no doubt he will do all in his power to help us. This is necessary, for the boatmen, with myself, are from force of circumstances, now occupying the portion of the one building

left by the storm; that, with exhalations from debris and vegetable matter accumulated on the island, will be anything but conducive to health.

In addition, I beg to report as arrivals at this port during the year:

Steamships, 25; barks, 3; schooners, 3. Total, 31. Quarantined.—Steamships, 3; barks, 3; schooners, 1. Total, 7.

Yours respectfully,

M. M. SAMS, Q. O.,
St. Helena Entrance, S. C.

REPORT OF QUARANTINE OFFICER PORT ROYAL HARBOR.

QUARANTINE PORT ROYAL HARBOR,
PORT ROYAL, S. C., September 30th, 1893.

To the Chairman of the Board of Health of Beaufort Township.

SIR: I have the honor to transmit my Report for the year just closed.

Dr. John A. Johnson, who for almost twenty years held the position of Quarantine Officer, retired January 31st, 1893, on account of increased age.

I assumed charge of the Station February 1st, 1893.

DISINFECTION AND QUARANTINE.

Vessels from infected (or suspected) ports are detained for observation ten (10) days and treated, with sulphur dioxide from twenty-four (24) to forty-eight (48) hours under closed hatches. This is done as soon as possible after arrival. The bilges pumped out and treated with a solution of bichloride of mercury; water closets flushed out with a solution of carbolic acid; hole washed out. Just before giving pratique vessel must receive a second treatment with sulphur dioxide.

MODE OF DISINFECTION.

The appliances for treating vessels at this Quarantine are crude and out of date. There is no way of applying moist heat or bichloride of mercury, or even sulphur dioxide in a scientific manner

THE HOLT SYSTEM.

The State of Louisiana appropriates every year one hundred thousand (\$100,000.00) for the Health Department. Most of this money is used for quarantine.

They are in possession of the best disinfecting plant, with the exception of that of Charleston, S. C., in America, designed by Dr. Joseph Holt, President of the Louisiana Board of Health, and called the "Holt System," which consists of—

- (a) A wharf at which vessels may lie and discharge ballast, receive a thorough disinfection, so as to be pronounced "mechanically clean."
- (b) A furnace and fan for blowing sulphur dioxide into vessels and displacing the foul air
- (c) A small boiler and chamber for treating clothing, bedding &c.
- (d) A tank containing a solution of bichloride of mercury with a hose attached for washing vessels.

THE PORT ROYAL QUARANTINE.

In order that the Quarantine be made more perfect, the "Holt System" should be introduced at this Quarantine Station. During the month of April the following improvements were made:

- (1) Dining room and sitting room of the officers' quarters were put in first-class order, woodwork and walls painted.
- (2) Wire fence run around the station.
- (3) Wharf repaired.
- (4) Hospital No. 1 plastered and six beds put in.
- (5) Small stone house built.

STORM OF AUGUST 27th, 1893.

Wind blew from Northeast in the morning, kept increasing in force up to midnight. Tide rose about seven feet above Spring tide level. Towards morning the wind changed to the Southeast; water commenced to fall. On the morning of the 28th the storm had about blown itself out.

DAMAGE TO THE QUARANTINE STATION.

(1) Wharf destroyed. (2) Officers' quarters partly unroofed, plastering down in two rooms, (3) Servants house partly unroofed. (4) Water fence (wire) carried away. (5) Almost every large tree blown down, and Eastern bank washed forty feet.

COST OF REPAIRS.

Roof.....	\$ 100 00
Replastering two rooms.....	50 00
Rebuilding water fence.....	150 00
	\$ 300 00

I have built a temporary wharf.

IMPORTANCE OF QUARANTINE.

Most people living away from the coast do not realize the importance of Quarantine. They think it is only beneficial to those living upon the coast. This is a great mistake. Quarantine is not a local affair. Small-pox or cholera getting through is as likely to prevail in Columbia or Greenville as in Beaufort or Charleston.

The yellow fever at Brunswick alarmed many people. Quarantine was established at Yemassee and pilots instructed to anchor all vessels at Quarantine Station.

Cholera has made its appearance in several cities on the continent and in England.

I regret to have to inform you of the death of my predecessor, Dr. John A. Johnson, at his home in Beaufort on September 26th, 1893.

List of arrivals and account current herewith enclosed.

I am, very respectfully,

ALLAN STUART, Quarantine Officer.

ARRIVALS AT QUARANTINE, PORT ROYAL HARBOR.

Year Ended September 30th, 1893.

From the following ports:

Genoa.....	1	Steamers.....	40
Hamburg.....	2	Barks.....	4
Boston.....	6	Barkentines.....	3
Huevla.....	1	Schooners.....	9
Norfolk.....	1	Yachts.....	—
Other American Ports.....	4		
Pysandee.....	1	Totals.....	57
St. Lucia.....	1		
Para.....	2		
Savannah.....	1		
Philadelphia.....	6		
Las Palmas.....	7		
Santa Cruz.....	5		
St. Michaels.....	1		
Vera Cruz.....	1		
Baltimore.....	3		
Barbadoes.....	1		
Newport News.....	2		
Inberbeba.....	1		
Maquyez.....	1		
London.....	1		
New York City.....	3		
Havana.....	1	Ordered to South Atlantic Quarantine (Na-	
Cardiff.....	2	tional), Blackbeard Islands, Sapelo Sound..	1
Cienfuegos.....	1	Detained for observation and disinfection...11	45
Ardrossan.....	1	Passed up the river.....	
Total.....	57	Total.....	57

Respectfully submitted,

ALLAN STUART, Quarantine Officer.

Report of Committee on State Penal and Charitable Institutions.

A. A. MOORE, M. D., CHAIRMAN.

We beg leave to again congratulate the State on the general sanitary condition of its penal and charitable institutions. The officers of these institutions are to be highly commended for the vigilance and faithfulness which they exercise for the health, the comfort and the improvement of those committed to their care.

Since our last annual report only a few minor changes have been made in the grounds and buildings of these institutions, and therefore this report will necessarily be brief. In our tour of inspection we first visited the

INSTITUTION FOR THE DEAF AND DUMB AND BLIND.

We were fortunate in being present while the exercises were in progress. We were shown into several of the class rooms and the pupils appeared to be cheerful, contented and happy. The teachers were diligently engaged in their noble and wonderful work.

The food supply, ventilation, warming and privies are the same as heretofore.

An addition has been made to the water supply by placing a hydraulic ram Southeast of the building. It increases the supply more than 100 per cent., and is derived from springs adjacent to the building.

The number of deaf males.....	.....	60
“ “ “ females.....	.....	42
“ “ “ blind males .....	.....	31
“ “ “ females .....	.....	19
Total.....	.....	152

There have been no deaths and not a single case of serious illness.

On account of its somewhat isolated situation, I suppose, this institution appears to be remarkably exempt from epidemic and contagious diseases.

Notwithstanding our repeated appeals heretofore to the Legislature, we regret to report that there is no improvement in the *lighting* of the building.

Superintendent N. F. Walker informed us that he was going to present a strong plea in behalf of this matter in his next Annual Report. We beg to mention two other wants, and they are a *better building for the colored pupils* and a supply of *laundry machinery*.

There have been no radical changes in the methods of instruction, but gradual improvement each year.

PENITENTIARY.

We have to report no changes in the grounds here during the past year, except that a portion of the prison yard has been laid off and enclosed, where the women can take exercise in the open air. A door has been cut in the end of their building which allows ready access to this space, serves as an additional means of escape from their quarters in case of fire, and also improves the ventilation. This was a want that has been long felt, and their quarters are now as comfortable as they can be made. They and the hospital are still heated by open stoves.

The hospital has not been entirely finished in the lower story, but is sufficiently comfortable for all purposes.

Next year the prison authorities purpose to put in operation a system of sewerage for the hospital and prison building. This was rendered impossible the past year in consequence of their having been compelled to lay a long line of sewer pipes for the better protection of the canal bank.

The supply of food, as heretofore, has been ample and varied. Additional land for a garden has been rented, which will insure a supply of fresh vegetables for the Winter and Spring.

Underclothing and socks will be furnished the prisoners this Winter.

The water supply is carefully watched, two analyses having been made by competent chemists, which demonstrate that it is fairly pure.

The prison mess hall will be heated by steam, which will render it much more comfortable.

The prisoners can support themselves, and by their labor make every needed improvement for their health and comfort.

Typhoid fever, pneumonia, a protracted form of malarial fever, and dysentery, have been more prevalent this year than usual. Otherwise the diseases have been such as are usual in this climate and under similar conditions.

The number of deaths from all causes is 56. This is a somewhat larger percentage than last year.

Number of prisoners in Penitentiary.....	284
Number of prisoners outside of Penitentiary	741
<hr/>	
Total.....	1,025
Number of white males.....	80
Number of white females.....	1
Number of colored males.....	904
Number of colored females.....	40
<hr/>	
Total	1,025

LUNATIC ASYLUM.

The only change about the grounds here has been the location of a new road inside the brick wall, from the front gate of the new asylum, along Pickens and Lumber streets, to the rear of the centre building.

The new plan of night watchmen, to which we alluded in our last report, has been put in operation, and the night service in all parts of the institution has been made much more efficient thereby. Stations connected by wire, with a clock in the centre building, have been placed in every building, ward and cellar. Every station is visited at least once every hour from 9 P. M. to sunrise. This reduces the risk of the spread of fire to a minimum before discovery.

The water closets in the male and female departments of the new Asylum have been well ventilated by having windows cut in the walls. Four new water closets have been added to the end section of the white men's department.

Since April all the sewerage of the Asylum has been utilized to irrigate twenty acres of the farm. Surface irrigation has been employed because of its cheapness and its adaptation to sandy soil. No receptacles for catching solid matter have yet been used. To prevent the soil from becoming water-logged a man is employed to direct the sewage stream over the land in trenches. This system is not only a great gain in fertilizing the farm, but disposes of the sewage without much danger to the Columbia water supply. The sewage stream is not now turned into Smith's Branch, except during heavy Summer rains, when the increased volume of water from the large area of roofing would cause deep washouts on the farm.

The supply of both food and clothing is sufficient.

There is no change in the water supply.

The electric plant has been steadily in use for six months; and while the wiring is very defective, yet it is now considered safe, so far as the danger of fire from it is concerned.

The plan of having a school for feeble-minded children has been abandoned, at least for the present.

The number of white males is.....	178
The number of white females is.....	252
The number of colored males is.....	180
The number of colored females is.....	149
<hr/>	
Total	759

The prevailing diseases have been phthisis pulmonalis, exhaustion from mania, melancholia and epilepsy.

There have been 158 deaths.

Our sincere thanks are due and are here tendered to Superintendent Walker, and to Doctors Pope and Babcock, for their copious notes, which form the basis of this report.

ANNUAL REPORTS

1892.

DEPARTMENT OF HEALTH

OF THE

CITY OF CHARLESTON, S. C.

REPORT OF HEALTH OFFICER FOR THE YEAR 1892.

CITY OF CHARLESTON, S. C.,
DEPARTMENT OF HEALTH, January 1st, 1893.

To the Honorable Mayor and Aldermen.

GENTLEMEN : I have the honor to submit my Annual Report, conveying the tables of vital statistics and meteorological observations, with such proceedings of this department as have been undertaken for the benefit of the department and the general health of the city, for the year 1892.

Charleston has been entirely free from epidemic disease, excepting a partial visitation of la grippe, causing twenty-eight white and sixteen colored deaths. With the Spring the disease disappeared. There were four white deaths from diphtheria and no colored. No scarlet fever deaths ; fourteen white and thirteen colored deaths from typhoid fever. This is a lesser number than the record of deaths shows for this disease since 1865, and would indicate a good, healthy water supply and a generally cleanly city.

There were 258 deaths from diarrhoeal diseases. This is an immense number. Year by year we realize that there is impure and unwholesome food sold in this city. It is most important, as we have indicated year by year, to have a food inspection. This should be commenced on however small a scale, and any outlay would be abundantly repaid in the diminution of the death rate and in the increased health of our citizens, white and black.

There were forty-four deaths from consumption among the white and 178 among the colored ; total, 222—one death from consumption in every eight and three-fourth deaths occurring during the year. During the year the United States, in August, September and October, was threatened with a cholera visitation. About the middle of August the disease became prevalent in Hamburg, and as a steady stream of immigration comes from that port to New York, it will be readily seen, as the United States government took no steps to stop this immigration, that the country was constantly threatened.

Charleston shared this feeling of a dangerous possibility. Happily only a few cases of cholera were reported in New York City. The greatest care was taken at the quarantine station, and inspections were rigidly carried out. Mayor Ficken at once organized a system of volunteer inspection by appointing two citizens from each square or block. A very general interest was manifested and the entire city was cleaned up.

An additional supply of disinfectants were purchased and freely and abundantly supplied.

The scavenging force of carts was increased, and the garbage was removed every day at an early hour in the morning, and before mid-day the city was relieved from all decomposing waste matter.

QUARANTINE.

Charleston harbor is possessed of a quarantine plant second to none in scientific equipment for disinfection.

Whilst the danger from cholera was upon us last Summer, it was a source of congratulation that we were prepared for infected ships, to have every dangerous article of clothing, bedding, &c., taken out and subjected to 230° Fahrenheit.

In the month of June a series of careful experiments were made by Dr. E. Wasdin, Professor of Bacteriology at the Medical College of the State of South Carolina, as to the germicidal value of the steam cylinder. Some ten or twelve different forms of bacteria or microbes were put into the chamber, and under the influence of a temperature of 230° Fahrenheit all were killed except the *bacillus subtilis*, an innocuous bacillus the most resistant to lethal influence known.

During the past two months the Station has been entirely renovated and two wharves rebuilt, the buildings overhauled and painted and repaired, the grounds made into a park, trees planted and the place generally improved.

Great credit is due to the Maritime Sanitation Committee, under the Chairmanship of Mr. Hall T. McGee, as also is due full recogni-

tion of the untiring efforts of Dr. Robert Lebby, Quarantine Officer, to keep the Station up to a high standard of perfection. The Station has been kept free from disease. Four vessels arrived from Hamburg with foul bills of health—cholera being there prevalent. They were thoroughly cleansed and disinfected, and allowed to the city.

There were 200 arrivals at Quarantine during 1892.

Steamships.....	75	Brigs.....	10
Barks	53	Schooners	62
Africa	1	Italy.....	2
Belgium	1	Madeira Islands	1
Cape de Verde	2	Portugal	4
Coastwise	77	Sicily.....	2
France	4	South America.....	9
Germany.....	12	Spain	9
Great Britain.....	18	Sweden	1
Holland	3	West Indies.....	53
Honduras	1		
		Total	200

SANITARY INSPECTORS.

The duties of the Sanitary Inspectors, as arranged in Charleston, are most important. To them is entrusted a house to house inspection to discover any nuisances affecting or likely to affect the health of the occupants of the premises.

The City is quadrisectioned and divided into Health Districts. One of the Sanitary Inspectors is assigned to each of these Districts.

It is his duty to watch out that the garbage carts attend to their duties in the earlier half of the day, and also to make an inspection of fifty premises every day, reporting at this office every noon making the same in writing and specifying his day's work, noting all matters requiring attention.

During the past year they have been active, intelligent and faithful.

The need of additional inspection for food and plumbing is ever present, and it is a great need. A proper service of this kind would be of great use in diminishing disease.

DISINFECTION.

Perhaps there is no service in the city more faithfully done and of more use than this work.

The Health Detective, Mr. Nipson, has now had many years experience and is most faithful in this work.

Every house where a case of infection or contagious disease occurs is required to be reported by the attending physician, and at once the Health Detective is ordered to go to the premises and furnish such disinfectants as are required. As soon as the case terminates the rooms are filled with dioxide of sulphur, the drain, vaults, etc., etc., are carefully examined and thoroughly disinfected and where requiring it change is made. For years we have had comparatively few deaths from scarlet fever and only a few deaths have occurred from diphteria, the greatest care is taken in these diseases, our record for the past year shows a fewer number of deaths from typhoid fever than we have had in twenty-five years, although the city must have increased considerably in population.

There were 70 houses fumigated and disinfected.

14,701 persons were given chloride of lime.

91,400 gallons of copperas solution disinfectant were distributed.

The stench traps ordered last year have been received, 60 in all of these some 18 or 20 have been put down in places that were emitting very offensive odor. The traps have proved most efficient.

Glanders—Number of horses, 3 ; mules killed, 3.

INTERMENTS.

Interments were made within the city limits during the year 1892 at the following burial grounds :

WHITES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
St. Philip's church yard.....	1	2	1	1	1	1	1	1	1	1	1	3	13
St. Paul's church yard.....			1					1		2	1	5	
St. Mary's church yard.....			1		1				1			3	
St. John's Lutheran church yard		2	2	1			1	1	1			8	
St. John's Chapel church yard.....		2	1		2		1	1		1		7	
St. Peter's church yard.....										1		1	
First Baptist church yard		2	1									3	
First Presbyterian church yard		1		1	1		1					3	
Second Presbyterian church yard..	1	1	1				1	1	1	1	1	7	
Bethel church yard	1	1	1	2			1					6	
Circular church yard.....			1	1								2	
Unitarian church yard.....										1		1	
Wentworth St. Luth. church yard					1			1				2	
K. K. Beth Elohim church yard.....							2			1		3	
Seaman's church yard.....	1		1		1	1	1	1	1			6	
Total	6	6	9	8	3	3	7	4	7	5	7	5	70

COLORED.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Eprat	4	2	3	6	3	2	2	2	2	2	2	2	24
Colored Lutheran.....	2	1	2	4	3	1	4	8	1	4	2	2	34
Colored Catholic.....	2	2	1	1	1	1	1	1	3	1	1	1	11
Colored Baptist.....	1	1	1	1	1	1	1	1	2	2	2	3	3
Bathsheba	1	1	1	2	1	2	1	2	1	1	1	1	7
Calvary, Episcopal.....	2	3	2	2	2	1	1	2	1	1	1	1	14
Colored Scotch.....	4	3	2	4	4	7	8	2	7	4	8	9	62
McPhelia	1	1	1	1	1	1	1	1	1	1	1	2	2
Brown Fellowship.....	2	2	1	1	1	1	1	1	1	1	1	1	3
Total.....	14	9	7	11	10	15	22	15	11	16	16	14	160

PUBLIC CEMETERIES.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
White	2	1	1	1	1	1	1	1	3	1	1	1	11
Colored.....	29	20	31	23	31	30	46	38	35	28	24	31	366
Totals	31	20	32	23	32	31	46	39	38	29	25	31	377

SCAVENGERING.

This very important service of Sanitary Police is under the direct supervision of the Health authorities. In looking carefully over the cities of the United States and comparing notes with various Health officers, I do not find many cities where the work is as efficiently done as it is in Charleston. The important feature here is that the city owns the plant for the service, and thus is able at all times to have entire control. About thirty carts are constantly employed, and from early morning hours are at work in carrying out the garbage beyond the city limits. It is deposited on the salt marshes to the northeast of the city, where the tide flows in and out every day. In a few weeks after it is placed there, decomposition having gone on, all traces of unpleasant odor disappears. The superintendent of the carts, Mr. Bischoff, has been very attentive to the work. During the prevalence

of cholera in New York Harbor, additional carts were put on and all or nearly all of the garbage of the city was removed out before 10 o'clock A. M.

The number of loads removed during the year was :

January		July	3,052
February		August	3,005
March		September	4,117
April.....	19,138	October	3,442
May.....		November.....	3,043
June		December	3,159
Total			38,956

NIGHT SOIL.

During the year 1892 there were 2,230 vaults cleaned out. These horrible receptacles, eternally storing up foul, offensive, decomposable and decomposing material, and emitting odors that at times are almost unbearable, still continue as a blot on our sanitary work in Charleston.

There are probably 10,000 vaults pouring into the soil solutions of offensive and unhealthy material, rendering our sub-soil more or less dangerous to human life.

Constant attention has been called to this serious evil during the past ten or twelve years from this office. So far it has been impossible to grapple the problem with any likelihood of success. Last year we suggested at least a commencement of the work, following the system adopted in Germany, of taking the city by sections. Some special tax or arrangement should be made to meet this most pressing need. The city could be divided into four or five parts, taking four years, a term of administration, for each, and if found easier of accomplishment a shorter term could obtain.

Taking from White Point Garden, the work could be arranged for up to Broad street as section No. 1 ; from this point, the work up to that point having been finished, could be carried to Wentworth, and when this section—No. 2—was finished, it could be carried up to Calhoun, as No. 3—and from there to Spring street as No. 4. It occurs to us that in this way water could be secured from the Artesian well service for the necessary flushing, the company finding a demand for their water, would doubtless arise to the great exigency and by further boring obtain the necessary water. We have for years recommended that no twenty-four hours should elapse without having every particle of excreta washed into the river.

CITY DISPENSARY SERVICE.

During the past year the Dispensary service has been modified from the system in use for nine years.

The city has been divided into 6 districts in lieu of 4 districts, and 6 physicians and 6 druggists have been employed in lieu of 4.

The change went into operation on June 1st. It is too short a period to draw a comparison as to efficiency. The tables show a large amount of work done. In 1891 there were 25,829 cases treated in the four Health Districts.

In 1892 there were reported 23,897 cases treated. It is, however, a grand charity, and as a rule the best service is rendered to the poor. It is open to all, white and black. There were 4,328 whites treated, and 19,569 colored. Total 23,897 during the year.

CITY DRUGGISTS.

The following is the report from the Druggists enumerating number of prescriptions filled on orders from the City Dispensary Physicians. It will be noted that there are different districts as to the year the new service of 6 Druggists in lieu of 4 having gone into effect, June 1 :

Health District No. 1—From January 1 to June 1	1,765
" " No. 1—From June 1 to December 31.....	1,068
" " No. 2—From January 1 to June 1.....	2,569
" " No. 2—From June December 31.....	2,244
" " No. 3—From January 1 to June 1.....	750
" " No. 3—From June 1 to December 31.....	1,625
" " No. 4—From January 1 to June 1.....	2,243
" " No. 4—From June 1 to December 31.....	2,217
" " No. 5—From June 1 to December 31.....	817
" " No. 6—From June 1 to December 31.....	1,623
Total	16,921

FINANCIAL.

Amount appropriated	\$15,040 00
Amount appropriated additional for purchase and distribution of disinfectants, etc., etc.....	2,600 00
 Total appropriated	\$17,640 00
Amounts expended	17,460 88
 Balance	\$ 179 12
Respectfully submitted,	
H. B. HORLBECK, M. D.,	
Health Officer.	

MORTUARY STATISTICS.

REPORT OF THE NUMBER OF DEATHS IN THE CITY OF CHARLESTON IN EACH MONTH, FOR THE YEAR 1892.

WHITES.

CAUSES OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Albuminura.....								1	2				3
Alcoholism.....	1							1			1		3
Anæmia.....		1							1		1		3
Anasarca.....										1			1
Aneurism Aorta.....	1												1
Angina Pectoris.....				1							2		3
Apoplexy.....	5	2	3	2	2	1		1	2	1	2	4	25
Appendicitis.....									1				1
Asthma.....			1										1
Atakia Locomotor.....						1				1			2
Atheroma.....	1												1
Bowels, Congestion of.....									1				1
Brain, Congestion of.....				2		1	1	1	1				5
Brain Effusion.....	1	1	3							1			6
Brain, Hæmorrhage.....								1	1				2
Brain, Inflammation.....													1
Brain, Softening of.....	1	1	1		1	1	1	1	1	1	1		9
Bronchitis.....	1	1						2	1	2	1	2	10
Bronchitis, Capillary.....	3	2	1										6
Cachexia.....	1									1	1		3
Calculi, Hepatic.....						1							1
Cancer.....					1							1	2
Cancer, Ileum.....										1			1
Cancer, Liver.....							1						1
Cancer, Stomach.....	1	1		1	1					1		1	6
Cancer, Uteri.....		1		1	1								3
Chill, Congestive.....			1				1	1		1			4
Cholera Infantum.....				8	3	7	3	3		1			25
Cholera Morbus.....							1			2			3
Consumption.....	4	7	2	2		4	4	3	6	3	5	4	44
Consumption, Laryngeal.....			1										1
Convulsions.....	3		1	2	1	3		1		1			12
Convulsions, Puerperal.....								1					1
Croup.....		1											1
Debility.....	2								1	1	1		5
Dementia.....								1			1		2
Dentition.....					2		2	1					3

DEATHS IN THE CITY OF CHARLESTON—Continued.

WHITES.

CAUSES OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Diarrhoea				1		1	1					1	4
Diphtheria		1	2								1		4
Dipsomania		1											1
Dropsy, Hepatic									1				1
Dysentery					1	1		1	1				4
Embolism, Cerebral				1		1							2
Endo, Carditis			1										1
Enteritis						1	1			2	1	2	7
Enteritis Colitis		2		2	2	8	1	2	1				18
Erysipelas	1			1								1	3
Fever, Congestive							1						1
Fever, Gastro-Enteritis							2	1					3
Fever, Malarial								2	1	2			5
Fever, Puerperal				1				1	1				3
Fever, Remittent								2					2
Fever, Typhoid	2	1	2		2			1	3	2	1		14
Fever, Typhoid Malaria						1	1					1	3
Gastritis	1			2		1		1					6
Gastro-Enteritis	1	1		1			2	1		2	1		9
Hæmoptysis												1	1
Hæmorrhage, Post Part		1										1	1
Heart, Disease of		7	3	2	2	1	1	3		2	2	2	25
Heart Hypertrophy			1		1								2
Hernia, Strangulated					1								1
Hydrothorax		1										1	2
Inanition	1		1						1				3
Influenza	10	7	7		3						1		28
Intussusceptio										1			1
Kidney, Bright's Disease of				3	1	1		1	1	2	4		13
Kidney, Inflammation of	1	1	1		1					2			6
Leprosy	1					1							1
Liver, Abscess of							1						1
Liver, Cirrhosis of	1	2	1				1		1	2			8
Liver, Congestion of										1			1
Liver, Inflammation of											1		1
Lungs, Congestion of	3	2		2			2	1	1				11

DEATHS IN THE CITY OF CHARLESTON—Continued.

WHITES.

CAUSES OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Lungs, Oedema.....	.	.	.	1	..	.	.	.	.	.	.	.	1
Marasmus .....	.	1	..	1	2	1	4	1	2	3	..	1	16
Meningitis	1	..	..	1	1	..	..	..	..	..	..	..	3
Neurasthenia.....	.	..	1	..	..	..	..	..	..	..	1	..	2
Old Age.....	5	7	3	..	1	..	2	1	2	2	6	..	29
Paralysis	1	1	2	1	1	1	..	1	3	3	1	2	17
Parturition .....	.	..	1	..	..	..	1	..	..	..	..	..	2
Pericarditis .....	.	1	..	..	..	..	..	..	..	..	..	..	1
Peritonitis .....	.	1	1	..	..	..	..	..	2	..	..	..	4
Placenta, Prævia.....	.	1	..	..	..	..	..	..	..	..	..	..	1
Pleurisy .....	.	..	..	1	1	..	..	..	..	..	..	..	2
Pneumonia.....	3	3	5	..	..	..	..	..	2	1	2	2	18
Pneumonia, Broncho.....	.	..	..	1	..	..	..	..	..	..	..	..	1
Ptomaine, Poison.....	.	..	..	..	..	..	..	..	..	..	..	..	1
Pyæmia .....	.	..	..	..	1	2	..	..	1	..	..	1	5
Pyosalpingitis	1	..	..	..	..	..	..	..	..	..	..	..	1
Rheumatism.....	.	..	..	1	..	..	..	..	..	..	..	..	1
Sclerosis .....	.	..	..	..	..	..	..	..	1	..	..	1	2
Scrofula .....	.	..	..	..	..	..	..	..	1	..	..	..	1
Septicæmia .....	.	1	3	3	1	1	1	1	1	..	1	2	14
Septicæmia, Puerperal.....	.	..	2	..	..	..	..	..	..	..	..	..	2
Spine, Disease of.....	.	..	..	..	..	2	..	..	1	..	..	..	3
Syphilis .....	.	..	..	1	..	..	1	..	..	..	1	1	3
Tracheotomy .....	.	..	..	..	..	..	1	..	..	..	..	..	1
Trimus Nascentium .....	.	..	..	2	..	..	2	1	1	1	1	1	8
Tuberculosis	4	3	1	1	1	1	4	2	1	5	5	4	32
Tumor .....	.	..	..	..	..	1	..	..	..	..	..	1	2
Ulcer, Gastric.....	.	..	..	..	..	..	..	..	..	..	1	..	1
Uræmia .....	.	..	..	..	..	..	..	..	..	..	..	1	1
Whooping Cough .....	.	..	..	..	2	2	3	..	..	1	1	1	10
Wounds, Intestines.....	.	..	..	..	..	..	..	1	..	..	..	..	1
Totals	56	57	54	42	46	35	60	42	50	46	50	48	568

DEATHS IN THE CITY OF CHARLESTON—Continued.

BLACKS AND COLORED.

CAUSES OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Abortion		1											1
Abscess											1		1
Albuminuria	1				1								2
Alcoholism.	1												1
Anaemia								1			1		2
Aneurism.								1		1			2
Apoplexy		4	2	3	1	2	4	1	1	4	1		23
Asthma					1		1			2			4
Atheroma								1					1
Bowels, Inflammation of.		2	1		4					1			8
Brain, Concussion										1			1
Brain, Congestion		2			2		1	2		3		1	11
Brain, Haemorrhage	1	1				1				1		1	5
Brain, Inflammation						1		1					2
Brain, Softening						1							1
Brain, Tumor	1									1			1
Bronchitis	2	6	3	1	2		1	2	2	1	4	3	27
Bronchitis, Capillary	4	4	2	3						1	2		16
Cachexia, Malarial					1								1
Cancer											1		1
Cancer, Mammary					1							1	2
Cancer, Rectum										1			1
Cancer, Stomach					1					1			2
Cancer, Tongue						1							1
Cancer, Uteri		2		1		2						1	6
Caries, Spinal Col.								1					1
Cellulitis, Puerperal											1		1
Chill, Cong.		1								1			2
Cholera, Infantum	1	1		1	4	6	13	5	3	1	1		36
Cholera, Morbus				1	1			2		1			5
Consumption	12	11	19	15	17	14	19	16	15	5	19	16	178
Consumption, Laryngeal				1									1
Convulsions	1	2	1	2	4	7	2	2	1	2	4	2	30
Convulsions, Puerperal	1	1		1		1	1					1	6
Croup, Membranous										1			1
Debility	6	1	5	8	3		1	1	3		2		30
Dementia				1									1
Dentition	1		5	2		4	9	9	3		2	1	36
Diarrhoea					4	6	6	4	1	2	3	1	27
Dropsy	1		3	1	1	3	1	1	1	6	1	1	13

DEATHS IN THE CITY OF CHARLESTON—Continued.

BLACKS AND COLORED.

CAUSES OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Dropsy, Cardiac.										1			1
Dropsy, Hapatic.	2	2			1			1	1				7
Dropsy, Renal.										1		1	2
Dysentery.		1			2	2	3	2	1			1	12
Endocarditis.					1								1
Enteritis.	1				4		4	2	1	3	1		16
Enteritis, Colitis.	3		3	3	10	9	9	4	1	1	4	5	51
Epilepsy.	1				1	2	1			1			6
Erysipelas.					1								1
Fever, Catarrhal.					1					1	1		3
Fever, Congestive.			1		1								2
Fever, Continued.								1					1
Fever, Enteric.									1	1			2
Fever, Gastric.						1							1
Fever, Intermittent.	1			2	1	1	1	1	1		1		9
Fever, Malarial.			1			1	3	4	5	1	1		16
Fever, Pernicious.						1							1
Fever, Puerperal.	1							1					2
Fever, Remittent.										1			1
Fever, Typhoid.	3			1	2		3	2		1	1		13
Fever, Typho-Malarial.					1			1	3	3			8
Fistula.				1									1
Gangrene.					1	1							2
Gastritis.	1	1	1	2	1	3	1	3	1		1		15
Gastro Enteritis.	1				3	5	3	1	3				16
Hæmorrhage.					1	1							2
Hæmorrhage, Post Part.			1										1
Hæmorrhage, Umbilical.											1		1
Heart, Disease of.	3	9	6	6	9	5	6	8	5	8	4	7	76
Hernia, Strang.	1			1									2
Hydrocephalus.									1		1		2
Hydro Pericardium.								1					1
Hydrophobia.			1										1
Hydro Thorax.	1	1											2
Impaction, Fœcal.				1									1
Inanition.	4	3	3		2	3	4	3	1	2	2		27
Influenza.	6	6	4										16
Intussusceptio.	1			1			1				1		4
Jaundice.			1		1								2
Kidneys, Bright's dis of.	3			3	2		1	2	1	1	2		15
Kidneys, Congestion of.										1			1
Kidneys, Inflam.			1			3	1		1	2	1	1	10

DEATHS IN THE CITY OF CHARLESTON—Continued.

BLACKS AND COLORED.

CAUSES OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Laryngitis						1							1
Liver, Cirrhosis.									1				1
Liver, Inflam. of								1					1
Lungs, Cong. of	8	3	1	3	2	2	1			1		5	26
Lungs, Hæmorrhage.	1	..	1	..	..	..	..				2		4
Lungs, Oedema						1					1		2
Marasmus	5	5	..	5	9	12	13	17	9	9	7	1	92
Meningitis	1	..	..	1	1	1	1	1	..	2	..	1	9
Meningitis, Cerebro Sp. . . . .	..	1	..	..	..	..	1						2
Necrosis										1			1
Neurasthemia									1				2
Old Age	9	3	4	2	2	1	2	2	..	3	3	3	34
Paralysis	3	1	2	1	3	1	4	4	3	2	2	3	29
Pericarditis . . . . .	..	1	..	..	..	..	..						1
Peritonitis	1	1	1	1	2	3	3	3	2	1	1	1	20
Placenta, Praevia				1	1								2
Pneumonia	7	1	7	6	3	2	2	1	3	4	3	3	42
Pneumonia, Broncho	1	1	..	..	..	..	..						2
Pneumonia, Typho							1						1
Pleurisy		1	..	..	..	..	..						1
Rheumatism						2						1	3
Scrofula			1	..	..	2			2		1	..	6
Septicæmia				1	1	..					1	1	5
Septicæmia, Puerperal		1	..	1	1	..	1				1	1	6
Skull, Fracture of							2						2
Spine, Fracture of					1	..	..						1
Stomatitis				1	..	..	..						1
Syphilis				1	..	..	1		1	1	..		4
Tabes, Mesenterica		1	..	..	1	1	3						6
Tetanus		1	1	1	1	..	..			1			5
Trush							1		1				2
Trimus, Nascentium	7	5	5	2	3	6	8	5	4	10	2	8	65
Tuberculosis	7	..	1	4	4	5	4	3	5	12	9	5	59
Tumor				2	..	..	..				1		3
Tonsilitis . . . . .						..	..			1	..		1
Uræmia						1	1	1			1		4
Ulcer, Gastric							1	1	1				3
Ulcer Duodenal												1	1
Urethra, Stricture		1	..	..	..	..	..						1
Vermes					1	..	..						1

DEATHS IN THE CITY OF CHARLESTON—Concluded.

BLACKS AND COLORED.

CAUSES OF DEATH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Whooping Cough.....	1	1	3	1	3	1	1	1	1	1	1	1	10
Wound	1	1	1	1	1	1	1	1	1	1	1	1	2
Wound, Gun Shot.....	1	1	1	1	1	1	1	1	1	1	1	1	5
Wound, Knife	1	1	1	1	1	1	1	1	1	1	1	1	2
Total	109	88	91	95	123	133	160	130	98	105	99	86	1317

Accidents, &c.

WHITES.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	Novemb'r.	December.	Total.
Accident.....	1	2	1	..	1	2	..	..	..	..	..	1	8
Cyanosis.....	..	..	1	2	..	..	1	..	..	..	..	1	5
Drowned.....	..	..	1	..	..	..	1	..	..	..	..	..	2
Suicide.....	..	1	..	..	1	..	..	..	..	..	..	..	3
Undeveloped.....	..	..	1	..	..	..	..	..	1	1	2	1	6
Murder.....	..	2	..	..	..	..	..	..	..	..	..	..	2
Totals.....	1	2	4	3	3	3	..	2	1	1	2	4	26

BLACK AND COLORED.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	Novemb'r.	December.	Total.
Accident.....	..	..	..	..	1	..	1	..	..	..	2	..	4
Burn.....	1	1	..	1	..	..	..	..	..	..	..	1	4
Cyanosis.....	..	..	..	..	..	..	1	..	..	..	..	1	2
Drowned.....	1	..	..	..	..	..	..	..	..	1	..	1	3
Hanging.....	..	..	..	1	..	..	..	..	..	..	..	..	1
Poison.....	..	..	..	..	1	..	..	..	..	..	..	..	1
Scalded.....	..	..	1	..	..	..	..	..	..	..	..	..	1
Undeveloped.....	5	..	1	1	5	3	4	5	4	..	1	7	36
Totals.....	7	1	2	3	5	5	4	7	4	1	3	10	52

MONTHS.	STILL BORN.						PREMATURE.					
	WHITE.			COLORED.			WHITE.			COLORED.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
January	2	3	5	8	5	13	...	...	...	...	1	1
February	1	3	4	12	..	12	1	..	1	1	1	1
March	3	2	5	11	4	15	..	1	1	..	..	..
April	4	1	5	10	2	12	1	..	1	..	..	..
May	2	1	3	10	3	13	..	..	..	1	..	1
June	1	..	1	7	7	14	..	..	..	1	..	2
July	2	..	2	7	10	17	..	..	..	..	..	..
August	3	3	6	12	7	19	1	..	1	1	..	1
September	1	1	2	10	3	13	..	..	..	1	3	4
October	2	3	5	12	5	17	1	..	1	1	2	3
November	1	3	4	12	8	20	..	1	1	1	2	3
December . . . . .	..	3	3	13	1	14	..	..	..	..	..	..
Totals	22	23	45	124	55	179	4	2	6	7	9	16

Comparative Statement as to Sex in Each Month.

MONTHS.	WHITE.			COLORED.			GRAND TOTAL.
	Male.	Female.	Total.	Male.	Female.	Total.	
	Male.	Female.	Total.	Male.	Female.	Total.	
January	27	29	56	48	61	109	165
February	31	26	57	45	43	88	145
March	24	30	54	46	45	91	145
April	20	22	42	45	50	95	137
May	24	22	46	62	61	123	169
June	19	16	35	70	63	133	168
July	36	24	60	75	85	160	220
August	23	19	42	51	79	130	172
September	26	24	50	41	57	98	148
October	26	20	46	49	56	105	151
November	30	20	50	41	58	99	149
December	27	21	48	43	43	86	134
Totals	313	273	586	616	701	1,317	1,903

MONTHS.	MARRIAGES.			BIRTHS.		
	White.	Colored.	Total.	White.	Colored.	Total.
January.....	17	29	46	52	88	140
February	9	28	37	37	90	127
March.....	14	37	51	39	61	100
April.....	29	28	57	47	63	120
May.....	9	13	22	34	56	90
June.....	19	23	42	35	71	106
July.....	9	20	29	37	79	116
August.....	5	11	16	44	81	125
September.....	6	14	20	46	70	116
October.....	8	25	33	38	73	111
November.....	16	27	43	36	76	112
December.....	14	16	30	35	91	126
Totals.....	155	271	426	480	909	1,389

Twins—Whites, 6 ; colored, 13. Total, 19.

NUMBER OF DEATHS IN EACH WARD IN EACH MONTH, 1892.

WHITES.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
No. 1.....	3	2	3	4	1	1	1	1	3	2	3	6	30
No. 2.....	4	4	2	4	2	3	2	1	2	3	3	2	32
No. 3.....	6	6	8	2	6	2	5	...	3	5	2	4	49
No. 4.....	3	1	3	7	5	2	2	4	6	1	6	4	44
No. 5.....	1	7	5	4	7	2	4	4	5	3	5	6	53
No. 6.....	4	5	7	3	2	3	7	1	3	2	2	2	41
No. 7.....	5	2	2	1	1	1	1	7	2	1	4	2	29
No. 8.....	14	11	7	3	8	7	7	7	6	6	8	10	94
No. 9.....	4	3	4	4	1	4	11	7	4	8	7	3	60
No. 10.....	4	8	5	4	5	5	7	4	10	5	3	4	64
No. 11.....	7	5	5	4	4	3	8	5	4	7	4	3	59
No. 12.....	1	3	3	2	4	2	5	1	2	3	3	2	31
Totals.....	56	57	54	42	46	35	60	42	50	46	50	48	586

COLORED.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
No. 1.....	3	5	7	6	7	7	4	8	6	6	1	6	66
No. 2.....	1	3	2	2	1	4	2	1	1	1	2	3	23
No. 3.....	2	3	1	3	9	8	4	10	3	5	5	4	57
No. 4.....	12	10	5	10	10	15	14	10	8	7	6	4	111
No. 5.....	10	6	11	13	15	6	12	11	1	8	8	6	107
No. 6.....	7	2	1	4	3	4	13	9	2	9	8	10	72
No. 7.....	6	5	3	7	11	9	18	7	6	6	7	6	91
No. 8.....	12	21	22	20	27	15	24	18	18	20	22	14	233
No. 9.....	7	4	3	2	2	11	12	5	4	3	6	2	61
No. 10.....	13	3	8	9	10	15	15	19	13	8	12	8	133
No. 11.....	19	17	15	11	15	23	23	19	18	17	12	10	199
No. 12.....	17	9	13	8	13	16	19	13	18	15	10	13	164
Totals.....	109	88	91	95	123	133	160	130	98	105	99	86	1317

NUMBER OF DEATHS, WITH AGES, IN EACH MONTH, FOR THE
YEAR 1892.

WHITES.

AGES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Under 1 year of age...	8	6	3	8	16	7	23	9	10	7	6	2	105
From 1 to 5 years....	2	4	4	2	3	6	7	1	2	5	1	1	38
From 5 to 10 years....	..	1	5	1	..	1	..	1	2	..	1	1	13
From 10 to 20 years...	3	2	1	2	4	3	2	2	2	1	1	3	26
From 20 to 30 years...	4	6	..	9	2	3	4	4	8	2	4	8	54
From 30 to 40 years....	5	4	15	3	5	2	7	5	4	5	8	6	69
From 40 to 50 years...	5	5	5	4	2	6	3	7	4	8	4	6	59
From 50 to 60 years...	6	7	2	3	6	3	6	5	6	6	11	4	65
From 60 to 70 years....	8	9	7	3	6	3	6	4	5	7	5	8	71
From 70 to 80 years....	8	8	4	6	1	1	..	2	5	4	6	6	51
From 80 to 90 years....	6	4	7	1	1	..	1	2	2	1	2	3	30
From 90 to 100 years...	1	1	1	..	..	..	1	..	..	..	1	..	5
Totals.....	56	57	54	42	46	35	60	42	50	46	50	48	586

BLACK AND COLORED.

AGES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Under 1 year of age...	24	21	18	17	35	37	51	26	21	26	21	24	321
From 1 to 5 years....	13	7	11	11	18	30	35	42	23	17	19	4	230
From 5 to 10 years....	1	4	2	3	4	3	7	4	2	4	3	2	39
From 10 to 20 years...	9	3	8	9	8	5	8	2	6	6	3	9	76
From 20 to 30 years...	11	11	15	13	10	14	15	13	10	10	13	8	143
From 30 to 40 years...	10	10	4	17	17	13	14	12	10	9	10	9	135
From 40 to 50 years...	10	5	8	8	6	12	8	9	6	10	8	5	95
From 50 to 60 years...	6	9	7	3	10	5	6	8	5	8	8	5	80
From 60 to 70 years....	8	10	6	7	5	4	6	1	6	4	9	5	71
From 70 to 80 years....	13	6	12	3	6	10	5	9	6	8	3	12	93
From 80 to 90 years....	2	2	..	4	4	..	1	2	3	3	2	3	26
From 90 to 100 years...	2	..	..	..	..	..	4	2	..	..	..	..	8
Totals.....	109	88	91	95	123	133	160	130	98	105	99	86	1317

NUMBER OF DEATHS IN EACH MONTH, WITH PLACE OF
NATIVITY, 1892.

WHITES.

NATIVES OF—

	January.	February.	March.	April.	May. —	June.	July.	August.	September.	October.	November.	December.	Totals.
City of Charleston..... .	28	25	34	20	27	25	38	17	28	21	30	26	319
South Carolina..... .	5	9	7	12	6	2	8	9	5	7	5	4	79
Alabama	1	..	..	1	..	1	..	..	..	..	..	..	3
Connecticut .....	..	1	..	..	..	..	..	..	..	..	..	1	2
Georgia	2	..	..	..	..	..	1	1	1	3	1	2	11
Maryland .....	..	1	..	..	..	..	..	1	1	..	..	..	3
Massachusetts .....	..	..	..	1	..	..	..	1	..	..	1	..	3
Michigan .....	..	..	..	..	..	..	..	..	..	..	1	..	1
New Jersey..... .	..	1	..	..	..	..	..	1	..	..	..	..	2
New York..... .	2	..	..	2	1	..	..	..	3	1	1	..	10
North Carolina..... .	..	1	..	..	..	2	..	1	1	..	1	1	7
Pennsylvania .....	..	..	..	..	..	..	..	..	..	..	1	..	1
Rhode Island .....	..	1	..	..	..	..	..	..	..	..	..	..	1
Vermont .....	..	..	..	..	..	..	1	..	..	..	..	..	1
Virginia .....	..	..	..	..	..	..	..	..	..	..	1	..	1
Austria .....	..	..	..	..	..	..	..	1	..	..	..	..	1
Bohemia .....	..	..	..	..	..	..	..	1	..	..	..	..	1
England..... .	2	2	..	1	..	1	2	2	1	1	..	..	12
France.. .....	..	..	1	..	..	..	1	..	..	..	..	..	2
Germany	5	11	5	2	4	1	1	2	4	5	5	3	48
Ireland	8	3	4	4	5	3	4	5	3	4	1	8	52
Italy .....	..	1	..	..	1	..	..	..	..	..	1	..	3
Norway	1	..	1	..	..	..	..	..	..	..	..	..	2
Russia .....	..	..	1	..	..	..	..	..	1	1	..	..	3
Saxony .....	..	..	..	..	1	1	..	..	..	..	..	..	2
Scotland .....	..	..	..	..	..	..	..	1	1	..	..	..	2
Spain .....	..	..	..	..	..	..	..	1	..	..	..	..	1
Sweden .....	..	1	..	..	..	..	..	..	..	..	..	..	1
West Indies .....	..	1	..	..	..	..	..	..	..	..	..	..	1
Unknown..... .	1	..	1	..	..	..	2	1	4	..	2	..	11
Totals	56	57	54	42	46	35	60	42	50	46	50	48	586

TABLE SHOWING THE TOTAL NUMBER OF CASES TREATED AND OF DEATHS IN THE CITY HOSPITAL AND HEALTH DISTRICTS DURING EACH QUARTER, 1892. NO. 1.

	WHITES. QUARTER ENDING.				BLACK AND COLORED. QUARTER ENDING.				Grand Totals in all Cases.	
	March 31,	June 30,	September 30,	December 31,	Totals in the Year.	March 31,	June 30,	September 30,	December 31,	
CASES TREATED.										
City Hospital.....	137	102	124	146	509	170	179	186	170	705
Health District, No. 1	498	216	.....	.....	714	1387	590	.....	.....	1947
Health District, No. 2	113	58	.....	.....	171	1559	894	.....	.....	2453
Health District, No. 3	651	358	.....	.....	1009	872	770	.....	.....	1642
Health District, No. 4	263	198	.....	.....	461	1318	1090	.....	.....	2408
Totals.....	1662	932	124	146	2864	5276	3523	186	170	9155
DEATHS.										
City Hospital.....	13	9	9	11	42	36	36	34	33	139
Health District, No. 1	4	0	.....	.....	4	18	10	.....	.....	28
Health District, No. 2	1	2	.....	.....	3	32	16	.....	.....	48
Health District, No. 3	2	0	.....	.....	2	10	12	.....	.....	22
Health District, No. 4	0	1	.....	.....	1	37	18	.....	.....	55
Totals	20	12	9	11	52	123	92	34	33	292
No. 2. CASES TREATED.										
Health District, No. 1.....	0	108	143	96	347	....	295	322	286	908
Health District, No. 2	0	58	33	32	123	....	448	877	569	2044
Health District, No. 3	0	181	42	90	313	....	385	702	766	1853
Health District, No. 4	0	99	54	47	200	....	545	1366	1039	2950
Health District, No. 5	0	0	479	427	906	....	0	887	721	1606
Health District, No. 6.....	0	0	248	183	431	....	0	1433	1231	2664
Totals.....	446	999	875	2320	.....	1673	5537	4612	12022	14342
DEATHS.										
Health District, No. 1	0	0	1	2	3	....	7	9	8	24
Health District, No. 2	0	0	0	0	0	....	9	26	8	41
Health District, No. 3	0	0	0	1	1	....	8	26	10	44
Health District, No. 4	0	0	0	1	1	....	9	28	16	54
Health District, No. 5	0	0	5	4	9	....	20	12	83	41
Health District, No. 6.....	0	0	1	2	3	....	28	20	48	51
Totals .....	.....	7	10	17	.....	33	137	72	242	259

It is necessary to make 2 Tables, as the number of City Dispensary Physicians was increased from 4 to 6, and the city was subdivided into 6 Health Districts, in lieu of 4.

As the change was made June 1st, for the four Districts, two-thirds of the cases and deaths have been put in the Table No. 1, and one-third in Table No. 2, as the service was for 2 months, which is two-thirds of the Quarter.

NUMBER OF DEATHS IN EACH MONTH, WITH PLACE OF NATIVITY,
1892.

BLACKS AND COLORED.

NATIVES OF	January	February	March	April	May	June	July	August	September	October	November	December	Total
City of Cha'ston	72	53	57	65	86	94	112	98	68	69	61	54	889
South Carolina..	28	27	21	21	32	37	46	25	27	29	29	25	347
Alabama.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	...	1
Arkansas.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	1
Connecticut.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Florida.....	1	2	..	..	..	..	..	..	..	..	..	..	3
Georgia.....	1	1	..	..	..	..	1	1	1	..	2	1	8
Louisiana.....	..	1	..	..	..	..	1	..	..	..	..	..	2
North Carolina..	1	..	3	2	..	..	..	1	..	1	..	..	8
Virginia.....	..	3	..	2	2	..	..	1	1	..	..	..	9
Hindostan.....	..	..	..	..	..	..	..	..	..	..	1	..	1
West Indies.....	..	..	..	..	..	..	..	..	..	1	..	..	1
Unknown.....	8	3	9	3	1	2	..	3	1	5	5	6	46
Totals	109	88	91	95	123	133	160	130	98	105	99	86	1317

TOTAL MORTALITY 1892—WHITES, BLACK AND COLORED.

SEX AND STATUS	January	February	March	April	May	June	July	August	September	October	November	December	Total
Male, White....	27	31	24	20	24	19	36	23	26	26	30	27	313
Female, White..	29	26	30	22	22	16	24	19	24	20	20	21	273
Totals, White	56	57	54	42	46	35	60	42	50	46	50	48	586
Male, Black and Colored.....	48	45	46	45	62	70	75	51	41	49	41	43	616
Female, Black and Colored..	61	43	45	50	61	63	85	79	57	56	58	43	701
Totals, Black & Colored.....	109	88	91	95	123	133	160	130	98	105	99	86	1317
Grand Totals.	165	145	145	137	169	168	220	172	148	151	149	134	1903

Estimated population—White, 28,870; Blacks and Colored, 36,295; Totals, 65,165. Proportion of Deaths—Whites, 1 in 49; Blacks and Colored, 1 in 27; Total proportion, 1 in 34.

Ratio per 1000 in the year—Whites.....	20.29
" " " " " Black and Colored...	36.28
" " " " " Total	29.20

COMPARATIVE MORTALITY.

YEARS	WHITES		BLACKS & COLORED	
	Population	Number of Deaths Proportion of Deaths	Population	Number of Deaths Proportion of Deaths
1892.....	28,870	586 | 1 in 49	36,295	1,317 | 1 in 27
1891.....	28,870	553 | 1 in 52	36,295	1,371 | 1 in 26
1890.....	28,870	511 | 1 in 56	36,295	1,310 | 1 in 28
1889.....	27,605	516 | 1 in 52	32,540	1,431 | 1 in 23
1888.....	27,605	492 | 1 in 56	32,540	1,375 | 1 in 23
1887.....	27,605	549 | 1 in 50	32,540	1,316 | 1 in 24
1886.....	27,605	571 | 1 in 48	32,540	1,596 | 1 in 20
1885.....	27,605	487 | 1 in 56	32,540	1,250 | 1 in 26
1884.....	25,000	592 | 1 in 42	27,286	1,215 | 1 in 22
1883.....	25,000	540 | 1 in 46	27,286	1,285 | 1 in 21

LONGEVITY.

1892—WHITE—LONGEVITY REPORT.

DATE OF DEATH.	AGE—YRS.
January 25—Margaret Hogan.....	80
January 9—Josephine M. Gadsden.....	80
January 11—Abram B. Anderson.....	80
January 17—Oliver H. Middleton.....	93
January 18—Joshua Toomer, M. D.....	80
January 13—Henry A. Duc	80
January 27—Elizabeth A. Getsinger.....	88
February 14—Martha M. Rose.....	84
February 17—Ann Johnson.....	92
February 18—Mary Munro.....	89
February 19—Susan H. Robinson.....	81
February 22—B. C. Saurez.....	81
March 2—F. B. Ellsworth.....	81
March 5—Lavivia E. Grube	84
March 7—John B. Grimball.....	91
March 7—John Conlon.....	82
March 9—Juliet F. Wallace	88
March 20—Amanda M. Post.....	81
March 20—Sophia Frost..... :	81
March 24—Harriet L. Aiken.....	80
April 12—Jane Hart.....	87
May 1—Catherine D. Parker.....	85
July 14—Mary Ryan.....	92
July 15—F. M. Robertson, M. D.....	85
August 21—Margaret Slatterly.....	83
August 26—Wm. L. Legerton.....	80
September 6—Thomas L. Legare	83
September 14—Mary W. Hughes.....	83
October 25—Peggy Stanton.....	83
November 16—E. McCrady.....	90
November 16—Mrs. I. B. Powell.....	87
November 21—Joseph Barada.....	86
December 6—Ellen Hurst.....	81
December 16—George I. Crafts.....	80
December 24—Ann Robinson.....	82

1892—COLORED.

January 8—Cecilia Brown.....	92
January 15—Sallie Bell.....	81
January 20—Ann Washington.....	95
January 23—Charlotte Middleton.....	88
February 5—Maria Robinson.....	81
February 25—Salina Lonesome	80
April 14—Benjamin Oree.....	85
April 22—Peter Fraser.....	80
April 24—Regina Ford.....	80
April 30—Nancy Green	80
May 3—Betsy Robinson.....	89
May 7—Charles Pinckney.....	80
May 25—Rose Henderson.....	80
May 28—Hannah Bryan.....	85
July 15—Louis Shepard.....	91
July 16—Sam Orr.....	85
July 17—Sam Ladson	90
July 18—Carolina Long.....	90
July 26—Minda Hutchinson.....	90
August 1—Charlotte Nelson.....	88
August 13—Jacob Jandon	95
August 15—Joanna Russell.....	82
August 31—Isabella Days.....	90
September 3—Richard Mustapha.....	85
September 6—Wm. Arthur	80
September 7—Robert B. Bryan	85
October 13—Cain Lawrence.....	85
October 28—Martha Lee.....	84
October 31—Elvina Manigault.....	83
November 10—Samuel Smith.....	80
November 16—Joseph Chaplain.....	80
December 4—Elizabeth Miller.....	80
December 17—Lydia Pery.....	80
December 29—Amy Heyward.....	80

ANNUAL SUMMARY OF METEOROLOGICAL OBSERVATIONS MADE BY THE U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU, CHARLESTON, S. C., 1892.

AIR PRESSURE.

Mean, reduced to 32° Fahrenheit, 8 a. m., 30.08 inches.

Mean, reduced to 32° Fahrenheit, 8 p. m., 30.05 inches.

Mean annual, reduced to 32° Fahrenheit, 30.06 inches.

Mean, reduced to 32° Fahrenheit and sea-level, 8 a. m., 30.13 inches.

Mean, reduced to 32° Fahrenheit and sea-level, 8 p. m., 30.10 inches.

Mean annual, reduced to 32° Fahrenheit and sea-level, 30.11 inches.

Highest, reduced to 32° Fahrenheit and sea-level, 30.57 inches, February 17.

Lowest, reduced to 32° Fahrenheit and sea-level, 29.48 inches, March 8.

Annual range in pressure, 1.09 inches.

The average annual pressure, reduced to 32° Fahrenheit and sea-level, of Charleston, for twenty years, is 30.08 inches. For the months: January, 30.18 inches; February, 30.13; March, 30.06; April, 30.04; May, 30.02; June, 30.03; July, 30.03; August, 30.03; September, 30.05; October, 30.08; November, 30.12; December, 30.16.

AIR TEMPERATURE.

Mean, 8 a. m., 62.0 degrees.

Mean, 8 p. m., 64.2 degrees.

Mean annual, 65.1 degrees.

The average annual temperature of Charleston, for 20 years, is 66.1°. For the months: January, 50.0 degrees; February, 53.2; March, 57.1; April, 64.8; May, 73.0; June, 79.6; July, 82.1; August, 80.7; September, 76.0; October, 67.1; November, 58.0; December, 51.3.

Highest, 95, July 29.

Lowest, 25, December 28.

Annual range, 70.

Greatest daily range, 28, January 28.

Least daily range, 1, March 25.

Greatest monthly range, 53, in November.

Least monthly range, 24, in August.

Mean monthly range, 38.

Mean daily range, 14.

Number of days on which temperatures were above 90: 20 days; in June, 3; July, 8; August, 9.

The average number of days on which temperatures were above 90, at Charleston, for 20 years, is 6. For the months: June, 6; July, 13; August, 5; September, 1.

Number of days on which temperatures were below 32: 14; in January, 5; February, 1; March, 1; November, 2; December, 5.

The average number of days on which temperatures were below 32, at Charleston, for 20 years, is 1. For the months: January, 3 days; February, 1; November, 1; December, 2.

Last ice formed March 18.

First ice formed November 24.

HUMIDITY.

Mean dew-point, 8 a. m., 55 degrees.

Mean dew-point, 8 p. m., 57.

Mean annual dew-point, 56.

The average annual dew-point of Charleston, for 10 years, is 58 degrees. For the months: January, 43 degrees; February, 47; March, 47; April, 55; May, 63; June, 70; July, 74; August, 75; September, 69; October, 60; November, 50; December, 45.

Mean relative humidity, 8 a. m., 78%.

Mean relative humidity, 8 p. m., 78.

Mean annual relative humidity, 78.

The average annual relative humidity, of Charleston, for 20 years, is 75%. For the months: January, 77%; February, 75; March, 72; April, 72; May, 73; June, 75; July, 76; August, 78; September 78; October, 76; November, 76; December, 76.

Mean vapor pressure, 8 a. m., 0.471 inch.

Mean vapor pressure, 8 p. m., 0.494 inch.

Mean annual vapor pressure, 0.482 inch.

WEATHER.

Mean cloudiness, (scale 0 to 10 tenths,) 8 a. m., 5.0 tenths.

Mean cloudiness, 8 p. m., 4.7 tenths.

Mean annual cloudiness, 5.1 tenths.

The average annual cloudiness, of Charleston, for 20 years, is 4.6 tenths. For the months: January, 4.8 tenths; February, 4.9; March, 4.4; April, 4.2; May, 4.2; June, 5.1; July, 5.1; August, 5.1; September, 4.9; October, 3.7; November, 4.2; December, 4.3.

Greatest monthly cloudiness, 7.3, in June.

Least monthly cloudiness, 2.9, in October.

There were 102 clear days, distributed as follows: January, 10 days; February, 9; March, 14; April, 5; May, 15; June, 2; July, 5; August, 1; September, 2; October, 16; November, 14; December, 9.

The annual average of clear days, of Charleston, for 20 years, is 11. For the months: January, 9 days; February, 11; March, 13; April, 13; May, 12; June, 8; July, 9; August, 9; September, 10; October, 14; November, 12; December, 13.

There were 181 partly cloudy days, distributed as follows: January, 8 days; February, 11; March, 9; April, 18; May, 13; June, 20; July, 19; August, 27; September, 19; October, 11; November, 13; December, 13.

The annual average of partly cloudy days, of Charleston, for 20 years, is 12. For the months: January, 11 days; February, 9; March, 10; April, 11; May, 13; June 14; July, 15; August, 13; September, 10; October, 10; November, 10; December, 10.

There were 83 cloudy days, distributed as follows: January, 13; February, 9; March, 8; April, 7; May, 3; June, 8; July, 7; August, 3; September, 9; October, 4; November, 3; December, 9.

The annual average of cloudy days, of Charleston, for 20 years, is 8. For the months: January, 11; February, 8; March, 8; April, 6; May, 6; June, 8; July, 7; August, 9; September, 10; October, 7; November, 8; December, 8.

WIND.

Prevailing direction, Southwest.

Total annual movement, 77,393 miles.

Greatest monthly movement, 7,446, in May.

Least monthly movement, 5,205, in November.

Greatest daily movement, 457, January 2.

Least daily movement, 78, February 10.

Highest velocity, 42 miles E., September 12.

Number of times the wind was observed blowing from the N.: 73 times; N. E., 149; E., 81; S. E., 31; S., 72; S. W., 179; W., 89; N. W., 58; calms, none, (0).

The average hourly wind velocity, for the year 1892, is 9 miles. The hourly values are: 1 a. m., 8 miles; 2 a. m., 8; 3 a. m., 7; 4 a. m., 7; 5 a. m., 7; 6 a. m., 7; 7 a. m., 7; 8 a. m., 8; 9 a. m., 9; 10 a. m., 9; 11 a. m., 10; 12 noon, 10; 1 p. m., 11; 2 p. m., 11; 3 p. m., 12; 4 p. m., 12; 5 p. m., 11; 6 p. m., 10; 7 p. m., 9; 8 p. m., 8; 9 p. m., 8; 10 p. m., 8; 11 p. m., 8; 12 midnight, 8.

The average annual movement of the wind, of Charleston, for 10 years, is 68,573 miles. For the months: January, 5,704 miles; February, 5,451; March, 6,231; April, 6,132; May, 6,412; June, 5,873; July, 5,686; August, 5,363; September, 5,622; October, 5,604; November, 5,201; December, 5,296.

PRECIPITATION.

Total, 53.32 inches.

Greatest monthly, 11.77 inches, in September.

Least monthly, 0.51 inches, in April.

Greatest in any 24 consecutive hours, 3.68 inches, July 5 and 6.

The average annual precipitation, of Charleston, for 20 years, is 56.81 inches. For the months: January, 4.07 inches; February, 3.46; March, 4.01; April, 4.06; May, 4.06; June, 5.29; July, 7.40; August, 7.31; September, 6.09; October, 4.36; November, 3.21; December, 3.49.

There were 120 "rainy" days, (or days on which precipitation from rain and hail occurred,) distributed as follows: January, 12 days; February, 10; March, 7; April, 7; May, 6; June, 20; July, 16; August, 10; September, 12; October, 5; November, 6; December, 9.

The annual average of "rainy" days, of Charleston, for 20 years, is 10. For the months: January, 11 days; February, 10; March, 10; April, 8; May, 9; June, 11; July, 12; August, 13; September, 11; October, 8; November, 8; December, 9.

There were 76 thunder-storms, distributed as follows: January, 0; February, 0; March, 1; April, 2; May, 5; June, 8; July, 20; August, 25; September, 11; October, 1; November, 2; December, 1.

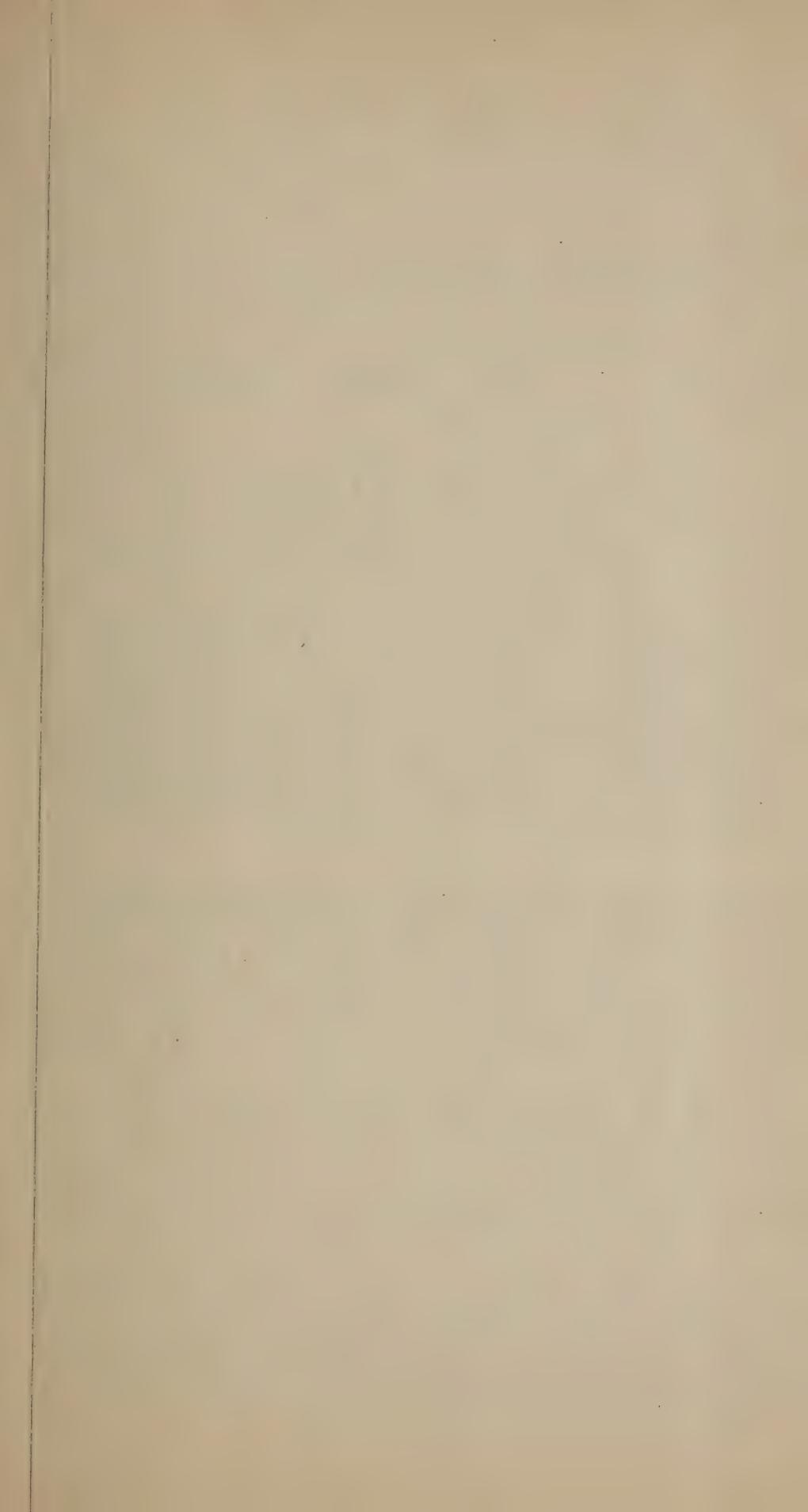
The annual average of thunder-storms, of Charleston, for 20 years, is 39. For the months: January, 1; February, 1; March, 1; April, 2; May, 4; June, 8; July, 9; August, 7; September, 3; October, 1; November, 1; December, 1.

The last frost occurred April 16.

The first frost occurred October 26.

L. N. JESUNOF SKY,
Observer, Weather Bureau.

Charleston, S. C., January 24, 1893.



U. S. DEPARTMENT OF AGRICULTURE,
WEATHER BUREAU,
CHARLESTON, S. C., January 10, 1893.

ANNUAL METEOROLOGICAL SUMMARY FOR THE YEAR ENDING DECEMBER 31, 1892, OF CHARLESTON, S. C.

Latitude N., $32^{\circ} 47'$. Longitude W., $79^{\circ} 56'$. Local Time 20 minutes slower than 75th Meridian time.

[Compiled for the City Board of Health.]

Abstract of Meteorological Observations made at Charleston, S. C., by Dr. Linning, 1737 to 1748; Drs. Chalmers and Shecut, 1750 to 1759; John Drayton, Esq., and Dr. Wilson, 1791 to 1811.

of Tuomey, 1816 to 1830; Charleston City Board of Health, 1832 to 1847 (in "Census of Charleston, S. C., 1848," kindly furnished by T. P. Lowndes, Esq.)

P. Raynel, 1848 to 1860; in "Resources of South Carolina," 1866 to 1870; U. S. Weather Bureau, 1871 to 1892.

L. N. JESUNOFSKY, *Observer, Weather Bureau.*

Death from Certain Zymotic Diseases in Twenty-Eight Years--From 1865 to 1892 Inclusive.

UNIVERSITY OF ILLINOIS-URBANA



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